THE

AMERICAN FARMER.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

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Commencement of the New Volume.

In beginning a new volume, we feel impelled, by a sense of gratitude, to return our thanks to our patrons for their kind and generous support.—To those of them, who have so unceasingly interested themselves to extend our circulation, we fail in language to convey even a semblance of those emotions which are indelibly impressed upon our heart. The feelings of personal regard towards ourself, which those unsolicited acts of friendship bespeak, are as flattering to our pride, and as gratifying to our ambition, as the measure of patriotism which prompted them, is honorable to the authors of them. We are not vain enough, however, to presume, that sympathy alone for us impelled those exertions; but that higher motives operated—motives which sprung from the conscientious belief, that by enlarging the spread of our journal, increased benefits would be conferred upon the agricultural interests of the country—upon those interests which form the mainstay of its prosperity, its power, and its wealth; for though all the industrial branches—all the creative pursuits—contribute their mites in swelling the volume of national strength and greatness, *agriculture*, after all, is the foundation upon which the welfare of individuals, as well as of States repose. Without the products of those engaged in Agriculture, every other pursuit connected with the arts of life, would be without the raw materials to be worked up into the countless cunningly devised elaborations of ingenuity and skill, which have imparted so much renown to the American mechanic, artizan, and manufacturer. Without the products of agriculture, trade of the forests, and of the mines—her adjunct, commerce could not exist—neither could the mechanic arts, as it is those engaged in developing the riches of the earth, who give life and animation to every industrial calling and occupation pursued by man. This, in brief, is the elevated position held by agriculturists—a position which should inspire them with that lofty ambition, which, in contemplating power earned by virtue, should arm them with self respect, and nerve them with a resolute determination to have their rights respected. Comprising, as Agriculturists do, three-fourths of the population and wealth of the nation—paying, as they do, in that ratio, the burthens of government, they have a right to demand of the legislative bodies of the country, attention to their wants. But unfortunately, nine times out of ten, what they ask for, is rejected, though other interests find favor from the same bodies, who turn the cold shoulder to them. Such, however, would not be the case, if agriculturists were true to themselves. *They have the power, and they should wield it at the ballot box, in the selection of their public servants.* So far as we have been able to comprehend the wants of agriculture, they consist in nothing but what legislative bodies should readily grant, because the right to grant them, is clearly within their constitutional powers.

Several of the States grant very handsome annual appropriations, to aid in organizing and supporting agricultural associations, in the several counties of such States. Movements are now being made in several others, to create Agricutural Schools, for the better and more appropriate education of farmers' sons, in those sciences which are connected with the art of agriculture, as *Chemistry*, *Geology*, *Mineralogy*, *Botany*, &c.—Whether these movements succeed at the present or not, they will ultimately succeed; for revolutions do not go backward. With all such movements, ONWARD, is the word, so that the friends of those measures have only to press forward with a bold, though patient spirit—with a fixed and determined resolution,—and success must, and will crown their patriotic efforts.

It is immaterial in our view to the issue, whether new schools be created, or whether the branches of learning indicated above, be introduced into those already existing; for we look upon the question, of *creating* or *engrafting*, as altogether unimportant. What we want, is, that the sciences named, shall be taught,—and we desire this, because we are impressed with the firm conviction, that, before we can look for any radical change in our system of farming, we must educate the rising rural population in a knowledge of those sciences, which develop the true principles of enlightened agriculture.

Let our youth once have the lights of the above sciences unfolded to them, and they will no longer feel repugnance at abandoning those old systems of their sires and grand-sires, which have robbed the earth of its fertility.

It is our intention to make the present volume as good as its predecessors—nay, if it be not better, it will not be because a zeal which increases with age, an industry as unconquerable as the courage of a

true man, and untiring energy, will not be exerted with that end in view.

The tillage of the earth in all its forms—every branch of agriculture—*farming*, *planting*, and *gardening*—the *culture of fruits*, and of *flowers*—the *management of stock*, and the *dairy*—the *diseases incident to domestic animals*, and their *cures*—the *management of poultry*—the *construction of farm buildings*:—in a word, every thing connected with agriculture in its broadest sense—every thing in which the farmer and planter, the horticulturist, and gardener, may be interested; whether it relates to the cultivation of their crops, the value of manures, and the system of manuring, the treatment of their farms, meadows, and gardens, the grazing of stock, or the business of the shepherd—we say all these subjects will be treated upon from time to time, in a practical, as well as scientific way, and as the field is a wide one, and our correspondents not only numerous, but among the best and most enlightened agricultural writers in the country, we feel justified in pledging our word, that the present volume will be of so high an order, that our friends may take pride in recommending it to the patronage of their neighbors.

THOUGHTS ON THE CULTURE OF WHEAT.

We do not intend to write an essay on the cultivation of wheat; but merely to throw out a few suggestions and hints, which we hope may prove serviceable. Should they only lead to reflection, they can not fail of being productive of good—though their teachings may not be immediately adopted—as reflection once commenced, unfolds to the mind not only the means by which ends may be attained, but arms it with that energy, and that enterprise, which rarely becomes satisfied until the object of its ambition shall have been accomplished.

And while we may be throwing out our own imperfect views upon this subject, we shall call to our aid those of "older and better" farmers than ourself; though we may be permitted to say, none more devoted to the cause of agriculture. Let us then speak, first,

Of the Soil. All soils in which wheat may be cultivated, should have in their composition more or less of *clay*—from 4 per cent. to 10 or 12 per cent. is sufficient to constitute a good wheat soil, though more is no disadvantage, provided there be in it also, all the inorganic substances, in proper proportions, as *oxides of iron* and *manganese*, *lime*, *magnesia*, *potash* and *soda*, *phosphoric acid*, *sulphuric acid*, *chlorine*, and *animal* and *vegetable matters*. Of the two latter, which constitute *mould*, there should be at least 3 per cent., while a few per cent. more, would be promotive of good results,—hence, the advantages derivable from the culture of clover and grass, for the purpose of creating the raw material to form mould out of. With *Dana*, we believe, that mould "is essential to the growth and perfection of seed; that without it, crops cannot be raised; that it is as essential to plants, as is food to animals:" and that, "so far as nourishment is derived from the soil," mould "is the food of plants."

We have thought much, and after the best reflection which we have been able to give to the subject, we have arrived at the conclusion, that one great cause of the infertility of our lands, arises from the want of *organic* matter—*mould*—in the soil, that being essential alike as a source of food to plants, as to impart to the earth the physical capacity to absorb and retain the riches of the air, and to infuse into it that positive electric power which conduces to decomposition of bodies competent to furnish nutriment to the growing crops. Without organic matter be in it, the soil must remain inert, and is, therefore, ill adapted for cultivation. If we be correct in our opinion, the remedy, in part, is of easy accomplishment—green crops must be grown and ploughed in by those who have not the raw material on their estates, such as peat, marsh and river mud, wood's-mould, leaves, and kindred substances, and these must be warmed into the incipient state of decay, by the application of alkaline or animal matters, before they are applied. To lime, or to marl, land in an exhausted state, without attending to placing organic matters in the soil, can never lead to any high state of improvement; both operations must be permitted to go on simultaneously to ensure good and effective results.

Among the mineral elements in wheat soil, none is more indispensable than *lime*. In Europe, it has been demonstrated, that soils which were rich in everything else, and which bore other crops in luxuriance, *refused to grow wheat; but that, after applications of lime, they grew it in perfection. Potash* is also indispensable, being a constituent element of the grain, and necessary to form, in combination with sand, the silicate of potash, that substance, which constitutes the outer-coating of the stalks of all the grass family, from corn to the most diminutive kind,—and which enables the wheat plant to stand erect, and support its head of grain; nor is chlorine much less important in this respect, as it serves to temper and give elasticity to the stalk, and thus qualifies it the better to withstand all external pressure. *Phosphoric acid*, is also highly important as well for the grain as straw; but all these substances, besides most of the others needed, may be furnished after the land has been limed, or marled, in a few bushels of ashes, say 20 to the acre, or even less, 2 bushels of bones dissolved in sulphuric acid, 2 bushels of refuse salt of the packers, and 1 bushel of plaster.

Clay soils. If the *soil* should be what may be termed, a *heavy clay, it should never be ploughed when wet;* for so sure as it be ploughed in that condition, so sure will it *not* be susceptible of being put in a state fit for the growth of the wheat crop, no matter how much labor may be bestowed in rolling, and harrowing. In despite of the best exertions, it will remain in hardened clods, impermeable alike to the roots of the plants, and to atmospheric influence.

Sandy lands are by no means favorable to the growth of wheat; but even such lands, may be made to grow remunerating crops, where they have a heavy growth of clover, or grass upon them. We have seen good crops grown on such lands, where clover-leys, and grass-swards, had been ploughed in. But where a farmer has clay, clayey-loam, or calcareous clay fields, he had better pass by his sandy field, and rely upon the former for his wheat crop.

Amendment of sands and clays. By applying 900 bushels of clay, per acre, to sandy land, the physical defect in its constitution may be cured; provided pains be taken to intermix the sand and clay intimately together, by ploughing, cross ploughing, and repeated harrowings. So may the physical defect of *very stiff clays* be remedied, by composts formed of peat, other vegetable matters, and lime

or marl,—or by growing a few crops of peas, beans, or buckwheat, and ploughing them in, and then top-dressing with lime, marl, or ashes. The application of lime, or marl, is to be understood, as being only necessary, where these minerals may be absent from, or only present in, the soils to be operated upon, in small quantities.

Draining. *Wet soils* should be drained, as no soil which retains in its body a superabundance of water, can be very productive, or bear crops of superior quality, no matter of what its constituent elements may be comprised. The following practical effects of *draining*, is summarily given by professor *Rodgers:*

"1. It carries off all stagnant water, and gives a ready escape to the excess of what falls in rain.

2. It prevents the ascent of water from below, either by capillary attraction, or springs.

3. It allows the water of rains to penetrate, and find a ready passage from the soil, *instead of washing the surface.*

4. The descent of water through the soil is followed by fresh air, which occupies the space just left by the water.

5. The soil after thorough draining becomes looser, more friable and easily broken; this is especially true of stubborn clays, which in practice become altogether another soil.

6. By freeing the soil from the excess of water, it becomes warmer, and thereby advances the crop to an earlier harvest: thus it is *equivalent to a change of climate.*

7. When the autumn is wet, draining carries off the superabundance of water, and prepares the land for sowing fall crops, which would otherwise be retarded, or altogether prevented.

8. In its consequences it is equivalent to an actual deepening of the soil.

9. In *wet soils*, bones, wood ashes, rape-dust, nitrate of soda, and all other artificial manures are thrown away.

10. He who drains confers a benefit upon [himself, family,] and neighbors.

11. It produces a more salubrious climate, and conduces greatly to the health and moral happiness of the whole population." And we will add from prof. Gray:—

That "an excess of moisture prevents the process of decay, or the decomposition of the organic matters in the soil, and thus cuts off a *regular* supply of food."

The "lands which have an excess of water, often become *dry* and compact in seasons of drought.—The roots are thus not only prevented from penetrating the soil and from extending themselves freely in all directions, but the influence of the air, and of the dew, which are so important in dry weather, are almost wholly excluded from them. Hence such soils, especially if they are stiff clays, suffer as much from drought as from excessive moisture."

That "when the roots of plants extend in a wet soil, the food is too much diluted, or is not prepared in sufficient quantities to ensure a healthful and vigorous growth. Leaves and ill-formed shoots will sometimes be abundant, instead of flowers and fruit."

That "experience shows that however well a soil may be constituted in its mineral ingredients, and however rich it may be in humus or geine* and salts, no cultivated crop will flourish well unless the surface of the soil, and the soil itself is made dry during the growth of the crop, and when required to be worked by the plough or the hoe."

Ploughing. Much of the success of a crop depends upon the manner in which land may be ploughed and pulverized. If the soil be ploughed deep, and the roller and harrow be plied until a fine tilth be obtained, and there be nourishment in the land, the plants will find it; for in proportion to the division of the soil into minute particles, so will be the facilities of the plants to extend their roots in search of food; and that they will avail themselves of such facilities, no one, who may have studied their habitudes, will for a moment doubt.

As we said last year, we say this:—Land intended for wheat should be ploughed at least 8 inches deep, *and if it be sound land, not surcharged with water, that it would be benefitted by being subsoiled some 6 or 8 inches more.* That land thus prepared, would yield in a greatly increased ratio, we do not entertain the slightest doubt. It is perfectly consonant with common sense and reason that it should do so. By deepening the soil, the area of the *pasture of the plants is increased*, and you increase also, the facilities for the admission of atmosphere into the soil, and thereby promote its meliorating influence, both upon the soil, and upon the plants; and, as a consequence, upon the produce. The effect of the *oxygen* of the air upon soils, cannot be too highly appreciated, as it is one of the great agents, by which decomposition is produced in those substances in the earth, which contribute to the nourishment of plants; nor are the *nitrogen* and *carbonic acid*, which form the other constituents of the atmosphere, less important; nor their admission into the earth less necessary; for though we *do not* subscribe to the doctrine, that *all* the ammonia and carbonic acid comes from the air, we believe that a very large share of them do, and hence, that it is necessary, in the preparation of our land, that we should make provision for their introduction therein. Fine tilth then, and deep ploughing, are the conditions necessary to affect this object. But there is another benefit to result;—by having a good, deep, well pulverized surface soil, the crop suffers less in times of heavy rains, from excess of water, and less from want of moisture, in times of drought. By having an enlarged body of soil to saturate, the rain which falls has a more capacious receptacle, and of course, there is a greater diffusion of the water, which, comparatively, protects the roots of the plants from the bad effects of super-saturation:—while, in time of drought, the supply of moisture, by capillary attraction, is much increased, the reservoir, whence the supply is derived, being larger.

The above are some of the advantages resulting from deep tillage; sufficient, we think, to commend the practice.

As we are desirous of introducing the opinions of several eminent wheat-growers upon this head of our subject, we shall content ourself with what we have said, and present the views of the gentlemen alluded to, in the hope that they may meet with the favorable consideration of our readers.

METHOD OF GROWING WHEAT—BENEFIT OF DEEP PLOUGHING.

We make the following extracts from a communication of Mr. *Linus Cone*, which appeared in the Michigan Farmer. In introducing it to the notice

* Mould

of our readers we will simply observe, that Mr. Cone has the reputation of being one of the most successful wheat growers in the State of Michigan, succeeding often in raising a large crop, when his neighbors *fail*. His *average* product for 17 years, would vary but little from 30 bushels per acre. He thus describes his management of one of his fields:

"One other field containing 11 acres and 140 rods of ground, designated on my farm map No. 1, has been cleared, a part of it 25, and a part 21 years, and been cropped after the old shallow, skinning system until nine years ago. Corn and peas had been grown upon it the previous year.—It contains a great variety of soils—clay, clayey loam, gravelly loam, sandy loam, and about two acres, a deep vegetable mould, resting on a sub-soil of stiff clayey loam. This part was wet, swampy land, reclaimed by under drains. I had become thoroughly convinced, by repeated experiments on other fields, *of the benefit of deep and thorough cultivation*, and now concluded to try it on this. About 40 loads of coarse barn-yard manure, 2 or 3 loads from the hog-pen, and a load of leached ashes, were put on the poorest places. This is all the manure the field ever received except *clover* and *plaster*. The manner of plowing I will describe; it is the way that I generally plough for wheat, except that I now plough but once for a crop. The ground was very dry and hard, the plough a large one, Mason's No. 5, the team 3 yoke of good oxen and a pair of heavy horses forward. The plough was constructed so as to run down to the beam, and when it would not run there of itself, a man stood on the beam to keep it there. All the ground that escaped the plough, around stumps and stones, was afterwards dug up with a shovel. It was harrowed and ploughed shallow twice afterwards the same way of the furrow.

After the wheat was sown, deep furrows were ploughed in every dead furrow and cleared out to the depth of 16 inches. These drains were 3 rods apart. After the first rain, these drains were examined and cleared out, so as to let the water run off. Now for all this labor I received 516 bushels of good wheat."

Mr. *Cone* deserves great credit for the thoroughness with which he prepares his land—credit for his courage, in not being frightened by that great bug-bear of many farmers, called the "*poison hard pan*," or subsoil, and we are pleased to find, that his courage was rewarded by so abundant—so generous—a product—the average of his field being upwards of 42 bushels and 7 lbs. per acre.

There are riches in the subsoil, which can be found by any one who will seek for them.

We extract the following from the *Transactions of the N. Y. State Agr. Society*, being part of the Legislative Agricultural discussions:

Hon. Mr. *Lawrence*, of Yates, stated that "the farmers of Yates *improved their land by deep plowing*. The farm which he occupied had been rented for many years previously to its coming into his possession, and had been ploughed about 4 inches deep, and produced 12 to 15 bushels of wheat per acre. He at once plowed it 6 or 7 inches deep, and raised the *first* season 30 bushels of wheat to the acre. It was the general impression in his county, that deep tillage was the best for all crops."

"Lt. Gov. *Patterson* said his experience was in favor of *deep ploughing*. The Wheat lands in the Genesee valley, when new, produced about 15 bushels of wheat per acre. They were plowed shallow; the farmers generally, had not then sufficient strength of team to plow deep. *Now they plow much deeper* than formerly, and obtain from 25 to 30 bushels per acre. In Livingston county, 35 bushels were obtained on some farms. Some farmers now plough 10 inches deep. Deep tillage has many advantages; an important one is, that it enables crops to stand drought."

Hon. Mr. *Cowles*, of Onondaga, said there was a great variety of soil in that county; that on which oak and chestnut constituted the chief timber growth, was best for wheat; but 30 years ago this kind of land was generally thought good for nothing. When it was first tilled it was ploughed about 4 inches deep, and it did not produce very well; *now* it is plowed from 7 to 10 inches deep, and the crops are good, and the land is growing better."

With respect to *deep ploughing*, we deem it fair to observe, that, although we have but little dread of the effects to be produced by turning up any reasonable portion of *subsoil*, yet we believe, that prudence would dictate that caution should be observed in deepening dark colored clays. In such soils, the oxide of iron, in a low state of oxidation, frequently abounds, in quantities which might, for a time, prove prejudicial to vegetation. In such lands, it would be best not to increase the depth at any one time more than two inches; and that they should be treated to a top-dressing of, say 5 bushels of lime to the acre. It would be well too, to plough such lands early, and harrow them at intervals, so as to give them the benefit of the decomposing effects of the lime, the atmosphere, and the rains, before seeding them down to wheat. If circumstances permitted, previous exposure to winter frosts would be desirable; though where the increase of depth is not more than two inches, we do not look upon winter exposure as an indispensable pre-requisite to success.

If the field to be seeded to wheat, be a *clover-ley*, or *grass-sward*, difficulty may be apprehended from *cut* and *wire worms*,—therefore, we would top-dress with a mixture of 3 bushels of freshly slaked lime, and 2 bushels of salt to the acre, some weeks before seeding. If packers' salt can be obtained, the dressing would be a cheap one; but as each would act as manure, besides contributing to the death of the worms, the price of the salt should not be considered an object.

The seeding of wheat to *standing corn*, we have always looked upon as a slovenly and wasteful practice, at best; but when necessity compels the measure, the seed should be either ploughed or cultivated in, say from 2 to 3 inches deep.

Manuring and Manures. We have always believed, that the fears entertained of manuring wheat, lest it might become too rank, and lodge, as being groundless. The instances of large yields of wheat after heavy applications of strong animal manures, which we gave in our September number, last year, was, we think, conclusive upon this head; but if it had not been, the success which has attended the practice that has obtained in England, for years, of using the strongest and most concentrated manures—as well as the more recent use of *bone-dust* and *guano*, in our own country, is calculated to dissipate all apprehensions of the kind; for in almost every instance where they have been used, the increase in the quantities grown, has clearly proved, that *wheat*, like every other crop, *requires to be fed*, and that, comparatively speaking, with a generous hand.

It has always been our belief that, if a few bushels of ashes and salt, per acre, had been used, as a means of preparing the materials to form the straw, elasticity and strength would have been imparted to it, to enable it to carry its heads of grain to maturity.

But suppose the wheat should become rank—as the term is—that fault might be corrected, either in spring, or fall, with decided advantage and profit, by turning the calves and sheep in to crop down its over-luxuriance.

Of all the grains, *wheat* has in it more *nitrogenous* substances than any other. Professor Johnston's analysis of a sample of flour grown in Ayrshire, Scotland, gave of such elements the following result:

Gluten	9.3 per cent.
Albumen	0.45 "
Casein	0.40 "
Making in all	10.15 per cent.*

More than 1-6th part, then, of the flour of wheat, is nutritive matter. Whence comes it? Why, in part from the earth, and in part from the air. The air, however, we apprehend, can only be a contributor, to any great extent, while the plant is comparatively young; while its leaves are, to a vigorous extent, in possession of their absorbing powers. When the grain commences forming, the whole structure of leaves progressively dry up, and lose, to a considerable degree, that sensitiveness, essential to absorption. Where then, does the material to form gluten, albumen, and casein, come from? Why, chiefly from the soil, and can only be supplied by vegetable and animal manures. Suppose the supply of such substances be deficient in the soil? What then? Why, a diminished product will be the result; for, to ensure a full yield of grain, the food must be present in the earth, to afford a continuous supply of food during the whole period of its growth and maturation. Surely then, there can be but one rational opinion formed, as to the necessity of manuring land on which wheat is to be grown, where *much product is expected;* for unless the material to form the grain out of, be present in the soil, to meet the deficiency not derivable from the atmosphere, it is unreasonable to expect the plant to form it; you might as well expect a tailor to make a coat out of nothing, or out of half, or three-fourths, of a pattern of cloth—and we think, it would be equally as quixotic as unreasonable, to look to the atmosphere as the source of the *whole* of the carbonic acid and nitrogen.

To us it appears manifest, that the *organic* part of plants, viz: their *carbon, oxygen, nitrogen* and *hydrogen*, are, as we before stated, supplied from the earth and air, in common. What the relative proportions, which each may supply, is an unsettled question,—and, from the very nature of things, must remain so, till the end of time, notwithstanding professor Liebig's assumption, that ALL the *carbon* and *nitrogen*, is supplied by the air. To assume such to be the fact, would be to take from the earth, and its vegetable and animal contents, all agency whatsoever, in the work of reproduction, except that of keeping the plants in position, and of furnishing the *inorganic* portion of their food.—Such doctrine would represent barren old fields, for purposes of cultivation, just as valuable, as are the most fertile lands that the sun ever shone upon. Strange as it may seem, it is nevertheless true, that the doctrines of this truly eminent and distinguished chemist, would lead us to these extreme and absurd conclusions—conclusions that have been contradicted by the *practice* and *experience* of farmers, from the earliest history of agriculture. Every farmer, and farm laborer, who till lands that have been long in culture, do know, that, unless they be liberally manured, their produce will be small.

We have given before, the analysis of a sample of flour, analyzed by professor *Johnston*, to show its nitrogenous substances, and we now give another made by him, of the *grain of wheat*:

"THE ORGANIC SUBSTANCES IN THE GRAIN OF WHEAT ARE:—

	Per cent.
Water	15
Starch	42
Gum and Sugar	9
Nitrogenous substances	15
Oil	2
Woody fibre	15
Ash	2
	100

Let us now turn, for a moment, to the *demands* made upon the soil for their *inorganic* matter.

Professor *Johnston* represents the effect of the exhaustion or withdrawal of the *inorganic substances* from the soil by a four-years course of cropping, in the following *tabular* statement:

	Barley.			Wheat.			
	Turnips.	Grain.	Straw.	Red Clover.	Rye Grass.	Grain.	Straw.	Total.
Potash	145.5	5.6	4.5	45.0	28.5	3.3	0.6	233.0
Soda	64.3	5.8	1.1	12.0	9.0	3.5	0.9	96.6
Lime	45.8	2.1	12.9	63.0	16.5	1.5	7.2	149.0
Magnesia	15.5	3.6	1.8	7.5	2.0	1.5	1.0	32.9
Alumina	2.2	0.5	3.4	0.3	0.8	0.4	2.7	10.3
Silica	23.6	23.6	90.0	8.0	62.0	6.0	86.0	299.2
Sulphuric acid	49.0	1.2	2.8	10.0	8.0	0.8	1.0	72.8
Phosphoric acid	22.4	4.2	3.7	15.0	0.6	0.6	5.0	51.5
Chlorine	14.5	0.4	1.5	8.0	0.2	0.1	0.9	25.6
						Total,		970.9.

*Different kinds of wheat vary as to the produce of gluten, the quantity being governed by climate, the fertility of the soil, and the quality and quantity of the manure applied; *animal manures* yielding more than those of a vegetable nature—a great is the effect produced by these causes, that the quantity of *gluten* in different kinds of wheat, range from 8 to 35 per cent.

He then gives the following estimate of substances that would be required every fourth year, to replace the above inorganic substances, carried off by the crops grown on the land during the rotation.

"These quantities are as follow, in pounds:—

	Total.	For the green crops.	For the corn crops.
Pearl ash	325	316	9
Carbonate of soda	333	290	43
Common salt	43	38	5
Gypsum	—	30	—
Quick lime	150	100	7
Epsom salts	200	150	50
Alum	83	27	56
Bone-dust	210	150	60

With the exception of the silica, the substances above named, in the quantities given, will replace all the inorganic matters contained in the whole crops reared, the turnip tops alone not included."

The above tables are eminently serviceable, in showing the extent, and kinds, of the inorganic demands made upon each acre of the soil of a farm in the course of a four-years rotation. It is serviceable also, in demonstrating the necessity of all who cultivate the soil, to make all possible exertions to collect and economise every substance on their farms which are capable of being converted into manure, in order that they may, without detriment to the fertility of their land, be saved from the necessity of incurring the expense that would be consequent upon purchasing the articles enumerated in the last table, every fourth year. By carefully bedding their cow yards, and pig yards, with peat, marsh mud, weeds, river mud, road scrapings, ditch earth, mould and leaves from the woods; by saving the liquid voidings of their stock, the urine, offals, and slops, of their dwellings, and the quarters of their slaves, and mixing the whole together with the solid excrements of their stable and cow-yards, they may not only raise good crops, but keep their arable lands in an improving condition; provided they attend to giving them periodical doses of lime, marl, and ashes. A few bushels, say 10 of lime, or 20 of marl, and 5 bushels of ashes, every fourth year, if applied, in addition to putrescent manures, should they grow clover and plough it in, there can be no question but that the productive capacity of their farms will be not only kept up, but improved.

To impress the value of the urine of a cow as a fertilizer upon the minds of our readers, we will state upon the authority of *Dana*, who is as intimate with its constituent elements and virtues, as he is with his garter, that "1000 lbs. of it contains 40 lbs. of Urea, which will, on decomposition, make 40 lbs. of ammonia, 2.05 lbs. of ammonia, already formed, 6.64 lbs. of potash, 5.54 lbs. of soda, 4.05 lbs. sulphuric acid, 0.70 lb. phosphoric acid, 2.72 lbs. chlorine, .65 lb. lime, .36 lb. magnesia, 0.4 oxide of iron, 0.1 oxide of manganese, .10 lb. albumen, 1.90 mucus, .90 hippuric acid, 5.16 lbs. lactic acid, 2.56 lbs. carbonic acid, .02 alumina, and .36 lbs. silica"—all of which elements are essential in the growth of all kinds of crops—and, if mixed with marsh mud or muck enough to dry it, would be found more valuable than twice the same quantity of barn-yard manure. It has every thing in it needed by plants,—in fact, it is very nearly as good as guano. In speaking of its powerful fertilizing properties, Dana expressly states:—

"That the quantity of liquid manure produced by one cow, annually, is equal to fertilizing [illegible] acres of ground, producing effects as durable as the solid evacuations. A cord of loam saturated with urine, is equal to a cord of the best rotted dung."

The *tabular statements*, which we copied from professor Johnston, are highly interesting for the *facts* which they present, and the *principles* they establish; but they are more peculiarly adapted to British husbandry, than to that of our own country. We shall, therefore, now present the views of Dr. *Daniel Lee*, upon a subject which comes directly home "to the bosoms and business" of us all. It is an extract from a paper from his able pen, which originally appeared in his journal, "*The Genesee Farmer*," on p. 56, vol. 7, and republished in the May number, for 1851. It is an extract from one of a series of able "articles on the *culture of wheat*," showing, from his "own chemical researches, *the intimate relation that subsists between clover and this important cereal.*"

We give this on two accounts,—*first*, because it contains most important *facts* and *information*, and, *secondly*, because Dr. *Lee* is one of the most accomplished and accurate analytical chemists in the country. He says:—

"There are 7.7 lbs. of ash in 100 lbs. of dry clover. If this crop be taken from a field for a number of years, without making restitution, it will be found quite exhausting, notwithstanding the power of clover to draw its organic nourishment from the atmosphere. An acre of stout clover when perfectly dry has been known to weigh 3[illegible] lbs. containing 284 lbs. of ash. This is some lbs. more than is removed from an acre in a crop of wheat. It is useful to study the mineral elements of this plant in connection with those of wheat. In 284 lbs. of the ash of clover there are

Phosphoric acid	18.00 lbs.
Sulphuric acid	7.00 "
Chlorine	7.00 "
Lime	70.00 "
Magnesia	18.00 "
Potash and Soda	77.00 "
Silica	15.00 "
Oxide of iron and alumina	00.90 "
Carbonic acid	71.00 "
	283.90

"Throwing out of the account the 71 lbs. of carbonic acid, we have 213 lbs. of earthy matter. An acre of wheat needs to form both seed and straw 17 lbs. of phosphoric acid. An acre of good clover will furnish 18 lbs. That quantity of wheat needs 2 lbs. of sulphuric acid. An acre of clover will supply 7 lbs. The former needs 1 lb. of chlorine—a substance that forms 60 per cent. in common salt. Clover will furnish 70 lbs. Wheat needs [illegible] lbs. of magnesia. Clover will supply 18 lbs. Wheat needs 24 lbs. of potash and soda; (and in excess.) Clover will furnish 77 lbs. Wheat needs 121 lbs. of Silica; of which clover can furnish 15 lbs. Except Silica, or sand, it will be seen that an acre of good clover yields all the several minerals needed by a crop of wheat; and some of the most valuable ones in excess. In its *organic* elements, the supply is not less abundant.

		Oxygen.	Carbon.	Hydrogen.
Clover has in	3693 lbs.	1750	1396	185
Wheat crop	3124 lbs.	1487	1262	171

It is particularly worthy of note that clover ids more than twice as much nitrogen as both wheat and straw require. It is proper to state to make 3693 lbs. of perfectly dry clover, one t have 4675 lbs. of common clover hay. But lowing in clover for wheat, we gain all the stub- and roots in addition to what the scythe slips in wing."

Mr. *Prideaux* states that the following quantities inorganic matters) are removed from an acre soil by a crop of wheat, of 25 bushels of grain, 3000 lbs. of straw:

	By the grain.	*By the straw.*	*Total*
	lbs.	lbs.	lbs.
tash	7.15	22.44	29.59
da	2.73	0.29	3.02
gnesia	3.63	6.89	10.52
sphoric acid	15.02	5.54	20.56
phuric acid	0.07	10.49	10.56
lorine	0.00	1.97	1.97
	28.60	37.62	

Gross weight to be returned to an acre 76.22

Stephens, in his "*Farmer's Guide*," whence we y the above estimates of Mr. Prideaux, states t the above substances may be all supplied to the l by an application of

60 lbs. Pearl ashes,
40 " Salt,
80 " Bone dust,
40 " Sulphuric acid, and
50 " Magnesia,

being put in wheat.

Without entering into any great nicety of calcu- ion, we think, that an application, annually, of bushels of ashes, (unslaked,) 2 bushels of salt, bushel of plaster, and 2 bushels of bone-dust, he latter to be dissolved in sulphuric acid,) on h acre of arable land, would keep up an ample ply of all the inorganic substances required by ops, and especially would such be the case, where ention may be paid to the accumulation, care, d application, of farm-yard manures and com- ts, as besides the *organic* ingredients which they tain, they possess also, all the inorganic ele- nts which enter into plants. The conclusion m, is a just one, that lands can only become ex- sted by neglect.

We have thus presented to your view, the con- uent elements of *wheat*, to show that this plant nds in need of food, and we shall now endeavor point out, what manures, if applied, the season mitting, will yield productive crops of this es- tial of life.

1. *Clover-leys* and *grass-sward* lands, we would t to from 150 to 200 lbs. of guano, mixed with ck of plaster to the 100 lbs. of guano, plough mixture in, and top dress with 5 bushels of es.

2. Lands not in grass, and which were consider- thin, we would give from 200 to 300 lbs. of gu- , mixed with 5 double horse loads of mould, sh, or river muck, and 1 peck of plaster, to h hundred pounds of guano—to be ploughed in; r which, we would top-dress with 5 bushels of to the acre.

3. If we applied stable or barn-yard manure, we ld, before applying it to the land, add to every ty loads of it, 1 bushel of plaster and 10 bush- of ashes, mix and shovel it over well, and leave heap a few weeks, then spread over each acre loads of the compost—the which we would gh in.

4. Five bushels of bone-dust, dissolved in sulphuric acid, as stated in our last number, mixed with 10 bushels of ashes, to be harrowed in with the seed wheat, will be found sufficient for an acre.

5. Five bushels of bones, dissolved with sulphuric acid, mixed with 5 bushels of ashes, 1 load of loam, and 3 gallons of fish oil, will form a good dressing for an acre.

6. Ten loads of barn-yard manure, mixed with 5 bushels of ashes, 1 bushel of plaster, and 2 bushels of salt, to be ploughed in, will, after remaining in heap two or three weeks, form a good dressing for an acre.

7. Ten loads of river mud, 10 bushels of ashes, and 1 bushel of plaster, mixed well together, and left in heap 3 weeks, and then spread, and ploughed in, will form a good dressing for an acre.

8. Ten loads of marsh or river muck, mixed with 10 bushels of ashes, and 5 bushels of bone-earth, and suffered to remain in heap a week or 10 days, will make a good dressing for an acre of land: so would 10 loads of marsh or river muck, mixed with 100 lbs. of guano, and 1 peck of plaster—each to be ploughed in.

9. Ten loads of wood's-mould, 100 lbs. of guano, 5 bushels of ashes, and 1 peck of plaster, mixed well together, and suffered to remain in heap 2 weeks before being spread and ploughed in, would make an admirable dressing for an acre.

Preparation of the seed. Form a salt brine, strong enough to float an egg—soak your seed wheat therein 12 or 24 hours, drain off the brine, spread the wheat on your barn floor, and strew over it slaked lime, shovel the wheat over, until each grain becomes coated with lime, and then sow.

No more seed wheat must be taken to the field each day than can be sown and covered.

Before soaking your seed, give it a good cleansing in a sifter, to get rid of the seeds of chess and other weeds.

It would be well to keep your seed wheat that you may take to the field, in bags or other cover, while not sowing it, so as to prevent its being dried by the sun and air. The soaking of your wheat, in the way recommended, will *prevent the grain of the crop from being smutted.*

There are other soaks spoken of, as ley from wood ashes—ley from lime—solution of Glauber salts—solution of arsenic—solution of copperas—stale urine—solution of saltpetre, &c., but we prefer that made from salt.

Selection of Seed Wheat. In the selection of your seed wheat, have regard to your soil and location, and sow that that is *hardy, early* and *prolific;* and, if you have to purchase it, be careful to buy none that is not well cleaned from the seeds of weeds.

As to the mode of seeding. Upon well prepared land, there can be no question but that *drilling in wheat* is the best; it takes less seed, will yield more, and operates as a preventive against winter killing, to a very considerable extent. We gave our views upon this subject last year very fully, and would refer to page 76 of the last volume therefor.

ALL WHEAT AFTER BEING PUT IN, SHOULD BE ROLLED.

Time of Seeding. It is not our purpose to designate any particular day for the seeding of wheat; but would observe, that any day from the beginning of *September*, till the middle of *October*, will answer; that when delayed till the latter month, it ought to be done as near the beginning as possible.

Depth of covering. From 2 to 3 inches is about the proper depth.

Quantity of seed per acre. If sown *broadcast*, 2 bushels of seed per acre should be sown.

If drilled in, 5 pecks to the acre will be enough.

Water-furrows. So soon as you have completed seeding, lay off water-furrows,—be particular to so construct them, as that they may be competent to pass off all the water readily;—and be sure to pass a heavy roller across the water furrows, as soon as you have completed them.

Spring management of your wheat fields—Sowing of clover and grass seeds. In the spring, as soon as the frost is out of the ground, and it becomes firm, pass a light harrow over the young wheat, then sow on every acre, 12 bushels of clover seed and 2 bushels of orchard grass seed,—each separately,—and finish your work by rolling the field with a heavy roller. This operation serves to ensure the germination of the grass and clover seeds, acts as a working to the wheat plants, consolidates the earth, and encourages the tillering of the wheat plants.

Granaries. Before you stow away your present crop of small grain, give your granaries a thorough cleaning. In the first place, sweep the ceiling and side walls, then sweep the floor—take up the dust and dirt, carefully, and BURN it. Do not sweep it out to breed millions of weevil and other insects. Then wash the ceiling, side walls, and floor, with strong ley, and whitewash the whole. For preventive means against the weevil, we refer to p. 77, vol. 6, in which will be found the mode of treatment pursued by that excellent farmer and accomplished gentleman, the Hon. Wm. Carmichael, who always does the thing as it ought to be done.

Destruction of Rats. If your barns and out-houses are infested with rats, this is a good time to go to work and destroy them, which can be very effectually done in this way. There is scarcely any thing in the form of food, that rats are fonder of, than they are of *fresh fish*. Treat them to messes of fresh fish, dusted over with *arsenic;* they will ravenously devour the fish, and as surely pay the forfeit of their lives for their fondness for this kind of diet. To allow each rat to have his share of the food, cut the fish into halves—this will make the fish go farther, and deprive the rats of all pretext or cause for grumbling, at not having received their share of the provision.

It would, perhaps, be best to treat the rats to a few messes of fish before adding the poison. This would induce them to take the prepared food the more readily, and in greater numbers, as the exemption at first from harm, would whet their appetites and encourage a ravenous indulgence.

VITALITY OF SEEDS.—Upon this head professor *Lindley* remarks:—"Seeds probably possess different powers of life, some preserving their vital principle through centuries of time, while others have an ephemeral existence under any circumstances. The reasons for this difference are unknown to us, apparently depend upon a first cause, over which we have therefore no control. I have myself raised raspberry plants from seeds found in an ancient coffin in a borough in Dorsetshire, which seeds, from the coins and other relicks met with near them, may be estimated to have been sixteen or seventeen hundred years old."

WORK FOR THE MONTH.

July is a busy month with all engaged in the occupations of farming, planting, or who may be in any way engaged in cultivating the earth. Through a large breadth of our confederacy of States, this the month devoted to the wheat-harvest—to the curing of that crop upon which thousands rely meet their moneyed engagements, and upon which the comfort of themselves and families chiefly depend. Therefore, as such is the case, we shall not tax the time of our readers with extended preliminary remarks, but come at once to what demands attention

ON THE FARM.

Harvesting.—This business, throughout many of our States is the one requiring *present* attention; may not, then, be inopportune to the occasion, present to our brethren a few reflections upon the points and duties, which, in our opinion, are calculated, if attended to, to promote their interests ensure success.

First of all then, we say, that every grower of wheat, should look well to his implements; he should carefully examine them, and see if he has as many as may be required to cut down his grain in good time; he should *personally* ascertain whether those he may have are in a first rate state of repair, and if they be not so, he should, without an hour's delay, have every necessary repair effected. If his stock of implements are not sufficient to meet the exigencies of his grain fields, he should forthwith buy more, and be sure to get them of the best and most substantial character; for a bad implement is dear at any price.

Having attended to his tools and implements, let him directly turn his attention to his *harvest force;* if he has not hands enough of his own,—and there are but few that have—he should immediately engage the services of those of the laborers in his neighborhood, whose reputation for industry, sobriety, and integrity, may afford a guaranty that they will do him justice,—and he should also, be sure, that they possess the requisite skill to cut and bind his grain without waste. While we are upon this branch of the subject, we would be permitted to impress upon all, the advantages resulting from having a large force at the time of securing their harvests: we have known a very large percentage of a fine crop of wheat lost by exposure to the weather, in consequence of its owner, through mistaken notions of economy, having failed to provide himself with sufficient force to secure his grain after it was cut down. There are two kinds of economy, one based on parsimony, which leads to loss—the other founded on an enlarged and comprehensive view of things, which teaches the propriety of accommodating means to ends, and whose results conduce to *profit*. In recommending the adoption of the latter policy, we are influenced by a conscientious belief in its justness, and not from any desire at dispensing as there is no one more averse than ourself, from an agriculturist incurring any expenditure that will not bring him back principal and remunerating interest. We would not advocate the expenditure of a single dollar, unless we thought—nay, unless we knew,—it would come back again increased in value.

A word or two now of *harvest supplies.* The should be liberal in quantity, and good in quality for when men are toiling beneath the almost consuming sun, they require additional food to supply the extra demands made upon their physical powers

tween meals, they should have luncheons served to them, and receive at short intervals refreshing drinks. We know of none better suited to the purpose, than one made of 5 gallons of cold water, half a gallon of molasses, and a quarter of a pound of ginger, well stirred,—such a drink is at once invigorating and free from danger.

Time of Cutting.—As we advised last year, we advise this. ☞ CUT YOUR GRAIN AT FROM 7 TO 10 DAYS BEFORE IT IS RIPE. ☜ By so doing you will save much that would otherwise be lost by shattering—your wheat will make more and better grain—grain that will yield more flour to the bushel, make more bread, bring a better price, and above all, protect it from the *rust*. As our last month's conversation was full upon this head, we respectfully refer you to that for our reasons and authority for this advice.

Upon this point, we gave last month, instances of the practice of several of the most distinguished farmers in England, as well as the concurring theory of several distinguished agricultural chemists, and we give below a paragraph showing that the same practice of early cutting is sanctioned by enlightened wheat growers in *France*:

"Mr. *Cadet de Vaux* has recommended, as an important innovation the *reaping* of corn [small grain] *before it is perfectly ripe*. This practice originated with Mr. *Salles*, of the Agricultural Society of Beziers: grain thus reaped (say eight days before it is ripe,) is fuller, larger and finer, and is never attacked by the weevil. This was proved by reaping one-half of a piece of corn field, as recommended, and leaving the other till the usual time. The *early* reaped portion gave a hectolitre (about 3 bushels) of corn [wheat] more for an acre of land than the later reaped. An equal quantity of flour from each was made into bread; that made from the corn [wheat] reaped green gave 7 lbs. of bread more than the other in 2 bushels. The weevil attacked the ripe but not the green. The proper time for reaping is when the grain, pressed between the fingers has a doughy appearance, like bread just hot from the oven, when pressed in the same way."

Upon the subject of *early*, or *late* cutting, Mr. John C. *Reid* of *La Porte, Indiana*, gives the following as his experience, in a letter to the Commissioner of Patents:

"The first when cut was in what was called *dough*, the last *very ripe*. The first cut weighed 65 lbs. per bushel; the last 60 to 63 lbs. The first made the finest flour and the greatest quantity to the bushel."

Hay-harvest.—We will seize the occasion to say, that grass cut when in bloom makes the best hay. As we gave our reasons fully for this in our article in our April number entitled "*An Essay on Meadows and their management, and the cultivation of grasses,*" we will not dwell upon them here, but respectfully refer you to that article.

Millet.—This grass may be sown up to the 10th of this month—for hay, or for feeding green, it is most excellent for forage. If 3 pecks per acre is sown on a rich loam, well manured, well ploughed, thoroughly harrowed, it will give as much green food as almost any thing else, and be fit to cut in six weeks.

Fall Potatoes.—Keep these clean of weeds,—and if you have not done so before, give them a topdressing of a mixture comprised as follows,—1 bushel of *lime*, 1 bushel of *ashes*, 1 bushel of *plaster* and 1 bushel of *salt*, mix the whole thoroughly together, and sow it broadcast over your potatoes. The quantities named will make a dressing for an acre.

Sheep.—Provide a trough, place it under cover in your sheep pasture, and once a week supply it with tar pretty freely covered over with salt. This will keep your sheep in good health, and serve as a preventive against the fly.

Fall Turnips.—You should make your arrangements to sow your fall turnips by the 25th of this month. If the first sowing should fail, you will, in the event, have ample time to re-sow, a fact that farmers should always look to, as *time* is an important item in farm-economy. We have known a crop cut off three times before a good stand of plants could be obtained.

Preparation of the ground.—For turnips, a deep bed is absolutely necessary, where large product is expected. Two ploughings is better than one. The first of which should be a deep one, say 8 inches deep. Prior to the first ploughing, put on *one-half* of your manure: spread it broad-cast over the ground, and let the distribution be as equal as possible, so that every part may be manured alike. Then let the ground be ploughed with truthfulness—no baulke left—harrow it until you have reduced it to a fine tilth, then finish your first ploughing by rolling. Just before you are about to sow your seed give another ploughing, say about 4 inches deep; harrow, put on the other half of your manure and harrow that in, then roll, and your ground will be fit to receive the seed.

Kinds and quantities of Manure.—Turnips being rapid growers, require to be well fed, to make them do justice to their full capacity for production, and they require too, that their food should be given them in a state ready for being eaten; that is, in a state of decomposition.

Of the domestic supply of manures, there is nothing better for a crop of turnips than *cow-dung*, but it should be well rotted before being applied—20 double-horse-cart-loads of this intimately mixed with 10 bushels of *ashes*, and 1 bushel of plaster, will be about the right quantity to manure an acre.

1. 10 double-horse-cart-loads of sheep dung mixed with 10 bushels of *ashes*, and 1 bushel of *plaster*, will make a good dressing for an acre; but as sheep's-dung, from its nature, is very decomposable, it, therefore, cannot well be applied too fresh.

2. 10 bushels of *bone-dust*, 10 bushels of *ashes*, 1 bushel of *salt*, and 1 bushel of plaster, mixed together, and suffered to remain in heap from 2 to 3 weeks, will make an excellent manuring for an acre of turnips.

4. 5 bushels of *bone-dust*, 3 gallons of common *fish oil*, 1 double-horse-cart-load of *mould*, and 1 double-horse-cart load of horse-dung, will make a good dressing for an acre of turnips.

5. 10 double-horse-cart-loads of *marsh-mud*, or river mud, 3 bushels of bone-dust, and 10 bushels of ashes, will make a good dressing for an acre of turnips.

6. 400 lbs. of *Guano*, and 1 bushel of *plaster*, mixed together, will manure an acre of turnips well.

7. 20 bushels of *bone-dust* dissolved in sulphuric acid, and mixed with 20 bushels of *ashes*, and 2 double-horse-cart-loads of *mould*, will manure an acre of turnips.

8. 10 loads of well rotted *stable dung*, mixed with 10 bushels of *ashes*, and 1 bushel of plaster, will manure an acre of turnips.

9. 5 double-horse-cart-loads of *stable dung*, 5 bu-

shels of *bone-dust*, and 10 bushels of *ashes*, will manure an acre of turnips.

10. 20 loads of *marsh mud*, mixed with 50 lbs. of the *nitrate* of *potash*, and 50 lbs. of the *nitrate of soda*, will manure an acre of turnips.

All the above to be well mixed together.

Preparation of the seed.—Soak the seed 24 hours in fish oil, then drain off the oil, and mix *ashes*, plaster, *soot*, or *slaked lime* with them, so as to coat them over, and prepare them for sowing.

Quantity of seed per acre.—If mixed with twice their bulk of sand, and sown by an experienced, careful hand, with good eyes and judgment, 1 lb. of seed will be sufficient for an acre: to provide against all contingencies, it would, perhaps, be most prudent to sow 1½ lb.

Time, and mode of sowing.—As before stated, turnip seed should be sown about the 25th of July, and from then, up to the 10th of August. Later than the last named period, involves the crop in uncertainty.

The seed may be broadcasted by the hand, or by the *Drill*, the latter is certainly best, because it distributes the seed with more regularity; harrow the seed in with a *light* harrow, and roll.

The neatest way to grow turnips, is by the *drill* culture—to drill the seed in in rows 1 foot apart, the plants to stand 8 inches apart in the rows. We say this is not only the neatest, but the most productive way of growing turnips. There are drills made for the purpose, which do the work with great nicety—with great precision.

After Culture.—So soon as the plants show themselves, sprinkle them over with fish oil. This must be repeated for several mornings in succession, and until the plants get into the rough-leaf.

If you cannot conveniently obtain the oil, dust the turnips for several successive mornings, while the dew is on the leaves of the plants, with ashes, soot, plaster, or lime, or with a mixture of equal parts of *plaster* and *salt*. The refuse salt of the beef packers and fishermen, which comes cheap, is as good as any other kind. The salt must be ground fine.

When the plants begin to bottle, that is, when the bulb has begun to form, pass a harrow through them. Don't be alarmed at the plants being pulled up by the teeth of the harrow—all the pulling up the harrow will do, will but serve to lessen your labor when you come to thin them out; besides, this harrowing operates as a cultivation, and thus subserves a two-fold purpose.

In a week from this time, you should go over your turnips, thin them out so as to stand from 6 to 8 inches apart, if sown or drilled in broadcast,—if drilled in rows, they must so stand in the rows. While thinning out the plants, you must eradicate all weeds and grass, and give the plants a working with the hoe: work around the bulbs, but *avoid* hilling them up.

In 8 or 10 days after this thinning of the turnips out, give them another weeding with the hoe, and the work of culture will have been completed.

If no ashes should be incorporated with the manure used, you should broadcast 20 bushels per acre over the ground at the time of sowing the seed, and about the same quantity of lime, unless you are satisfied that there is lime enough in your soil.

We have laid down a *formula* of manures, such as we *know* will bring a good crop of turnips, weather permitting; but it is not with the view of strictly confining you to any one of them, for any other manure, possessing in its constituents, the same, or similar organic and inorganic substances or virtues, will answer equally well—the great object is, to apply enough of putrescent and mineral substances to feed the crop.

Should the caterpillars attack your turnips, [illegible] in a flock of young ducks—should the grass-hoppers invade them, let your chickens loose upon them.

We have found it serviceable after the bulbs begin to form, to sow salt broadcast over the patch at the rate of 2 bushels per acre.

Peach Trees.—Examine your peach trees a few inches beneath the ground; wherever you see a hole stick the point of your pen-knife, piece of wire, a knitting needle, therein, and either pick out the worm, or kill him, fill up the puncture with a mixture of equal parts of soft or hard soap, sulphur, and salt, return the earth, and paint the body of the tree up to the branches, with the mixture, diluted, [illegible] above. Then sow a mixture 6 parts ashes, 1 part salt, and 1 part saltpetre, under the tree. Half a gallon of this last mixture will answer for a tree.

Apple Trees.—If the bark on your apple trees is scabby, rossy, or mossy, scrape off the dead bark, and paint the bodies with the soft soap mixture spoken of for peach trees: if the bark is not scabby, only paint the trunks of your trees.

Caterpillars.—These are often troublesome on apple and other fruit trees. Examine your trees, and take off all catterpillar nests, and burn them. A wire brush, fixed at the end of a long pole, will be able you to dislodge them. We have seen a mop fixed on a long pole, dipped in spirits of turpentine used for the purpose of removing the nests.

Pear, plum, and cherry trees.—Whenever you find a blighted limb on either of these, cut it off into the sound wood, and burn the part or parts cut off.

These trees, as well as *apricots*, may be budded this month, after the 20th.

Orchards.—As any decayed fruit may fall in your orchard, have them gathered and given to the hogs. If you cook them, they will be much better.

All decayed or dead limbs should be carefully sawed off close up to the body of the tree, the wound made smooth with a drawing knife, or any other suitable tool, and then painted over with a mixture of equal parts of *rosin*, *turpentine*, and *bees-wax*, with a mixture of 2 parts fresh cow dung, 1 part lime, 1 part ashes, and 1 part salt. The first mixture to be put on warm.

Rutabaga Turnips should have been drilled in last month, but may still be, up to the 15th of this month. For the mode of culture, &c. we refer to our directions of last month.

Root crops generally.—As cleanliness is essential to the growth of all root crops, see that yours are kept free from weeds and grass, and that the earth be kept open.

Bushes, briars, brambles, weeds, &c.—Declare a war of extermination against all such cumberers of the earth—carry that war into the enemy's country, and rest not, until you have achieved a glorious victory.

Collection of materials for composts.—Upon every convenient occasion, collect all proper substances on your farm capable of being converted into manure; form them into compost heaps,—don't let the size of your heaps alarm you; the larger they may be, and the more of them, so much the better; let them be as big, and numerous as they may, your various crops will find plants enough to eat all of them up.

There is no labor on a farm so well calculated to

turn usurious profits, as that appropriated to the collection of materials for making manure. With respect to the question—what will make manure?, is very readily answered,—*peat, marsh mud, river and creek mud, ditch scrapings, road scrapings*, the earth from *fence sides* and *corners, leaves, woods-mould*, weeds, grass, sea weeds, all animal refuse, rags, scraps of leather, bones; and it may be said, that every thing that has had life, is capable, through its own decay, to reproduce life again. The greater the medley forming a compost heap, the more valuable will the product be.

The value of such manures, will be greatly enhanced, if the soap suds, urine, pot-liquor, ashes and other slops, and offals, of every kind, either animal or vegetable, made about the house and out-houses, were daily thrown on the heaps, so as they would sink into the body of them. Let your fish-bones, crab-shells, egg-shells, and all the scrapings about the premises, find the same common receptacle, and, occasionally strew plaster over the heap.

Weeds.—Search out and cut up all the weeds on your place, and make them pay for the tax they have imposed upon you, by contributing to swell the size, number, and value of your compost heaps. Recollect that every thing that once lived, will rot, and that, in its rottenness are the recuperative principles of life.

Wet Lands.—If you have any such lands in culture, *drain them* as speedily as may be consistent with your other engagements. Wet lands, after being drained, and allowed time to carry off the water, become thoroughly changed in texture, are much easier worked, yield much more and better produce, are more readily warmed, and therefore earlier, sometimes to the extent of two weeks and more, and withal, more healthy after being drained.

Deep Ploughing.—As you will be soon breaking up your grounds for fall seeding, let us say to you, that if your land is *sound*, that is, not subject to be occasionly surcharged with water, it will be benefitted, by ploughing deeper than usual, provided, heretofore, you have only turned up four or five inches in depth. Let your depth be whatsoever it may, increase it two inches, if that will not carry you deeper than 8 or 10 inches. In those two inches, you may find *lime, potash, soda, phosphoric acid, sulphuric acid, chlorine*, organic matters, and several other substances of service to vegetation; enough, possibly, to supply the deficiencies of the surface soil. If, however, your soil is a wet one, deep ploughing will be of little or no avail—*the cure for wet lands, is draining*; and it should be at least one year, after being drained, to let the water pass off, before deep ploughing, and subsoil ploughing, are attempted on them. Relieve them of their water once, and you will then find they will change their very natures, and all for the better.

Sprouting.—This work should be attended to this month and next. Put the sprouts as cut off into piles, and when dry, burn them; their ashes will form an excellent ingredient in a compost heap.

Using Guano.—All guano, before being used, should be mixed with plaster, 25 lbs. of the latter, to every 100 lbs. of the former,—or it may be mixed with 2 bushels of pulverized charcoal.

Selling Meadows.—As August is the best month for laying down meadows, we thus early state the fact, to jog your memory, as to the propriety of providing yourself with manures. For further information, we refer to our Essay upon the subject in the *April*, and *May*, numbers of the last volume.

Liming and marling.—The questions being frequently asked us, what quantity of lime and marl should be used per acre? and how it should be used? we will here say, that for land in poor heart, 25 bus. of lime, or 50 bus. of marl, is enough; that for land in moderate fertility, 50 bushels of lime, or 100 bushels of marl is enough, and that for lands in real good heart, well filled with vegetable and animal matters, 100 bushels of lime, or 200 bushels of marl may be advantageously applied. As to the *how* it is to be used, the great point is *to get it on the land*, and see that the quantity allotted to it, per acre, is regularly and carefully spread. At the time of breaking up lands, either for *small grain*, or *corn*, is as good a time as any other, to put on either of these manures. The ground being broken up and harrowed, the lime or marl should be spread thereon, and harowed in, as the more intimately it may be mixed with the surface soil, the sooner will its meliorating action take place. An intimate comminglement, in the way suggested, may bring on its benefits several months sooner than if not harrowed in; it is thus brought immediately in contact with the bodies to be acted upon, and the processes of action and reaction immediately commence.

In applying lime, or marl, however, the owner of the land should not lose sight of the fact, that *putrescent manures* are also necessary to the support of the plants—that *lime* and *marl* though excellent in their way—though indispensable in every fertile soil, require the aid of *organic manures*, as every plant that grows and bears fruit, requires vegetable and animal food, as well as those of a mineral kind; that the food which plants most delight in, and prosper best in, is that which, in its composition, partakes of the nature of a salmangundi.

In another part of our journal, there will be found an article headed "*Use and benefits of lime in Scotland*," wherein, will be seen, in what high estimation it is there held, and how wonderful have been its meliorating effects. We refer to that article, in order that those of our readers who have not become believers in its virtues, may, by reading the opinions of practical farmers, be converted to the faith that is in us. We believe that no land which may be destitute of lime can be fertile; and that any land, no matter how poor it may be, by the aid of lime and putrescent manures, may, in the course of a few years, be brought to a state of great fertility, and that, by the application of *ashes*, which has nearly one-half lime, besides potash, magnesia, soda, sulphuric acid, phosphoric acid, chlorine, oxide of iron, manganese, and carbonic acid in its composition, the time for becoming fertile, may be materially shortened.

In *La Sarthe, France*, the farmers apply 11½ bushels, per acre, at the commencement of every rotation of 3 or 4 years, and this practice had the high sanction of the late *M. Puvis*, a successful practical farmer, and one of the best and most accurate agricultural chemists of the age. His opinion is worth infinitely more than is that of nine-tenths of the new-light chemists—he never reached conclusions by the hop, skip, and jump, process, but, before drawing his deductions, submitted every thing to the severest tests of oft repeated experiments. He was a chemist by education, and enthusiastically

devoted to the beautiful and truthful science; and, for thirty years of his life, an *extensive practical farmer; practising* on his large domains, according to the conclusions which he arrived at in his laboratory. The opinion of such a man is more valuable than much fine gold. And if 11 or 12 bushels of lime per acre, will suffice for all *present purposes*, what an immense amount may be spared in outlay, what an immense quantity more of land may be limed with the same sum of money!

As to the relative value between oyster-shell and stone lime, we give the preference to the former, *weight* for *weight*—the *phosphoric acid* which oyster shell lime contains, entitle it to that preference,—and the same remark, to a certain extent, will hold good as to shell-marl; for it, too, has a very notable percentage of phosphoric acid in it. Of such marl, we would say, that in proportion to the calcareous matter it may contain, so is it more valuable than the same quantity of stone-lime.

All lime, before being applied to light sandy lands, should be made into compost with clay, if clay can be obtained for the purpose. Thus applied, a physical improvement is made as well as a chemical defect cured. Peat or marsh mud would be excellent additions to the mixture, as they would impart absorptive powers to the same, as well as add vegetable and animal matter.

In connection with the use of lime, we will remark, that all who lime their lands, should get them into clover in as short a time thereafter as may be comportable with their convenience, in order that a foundation may be laid, for restoring to the soil at least something for the food carried off in the crops raised thereon, and that the lime may have materials to work up into manure; for that is one of the important offices it performs.

Ashes.—Whenever wood ashes can be obtained, they should be applied to the land, as they are rich in all the inorganic elements that are required as the food of plants, and which go to make up the constituent elements of a fertile soil. From 50 to 100 bushels, per acre, may be applied at a time, and with decided advantage, though less will be beneficial.

Anthracite coal ashes contain 62 per cent. of argillaceous matter, 5 per cent. of alumina, 6 per cent. of lime, 8 per cent. of magnesia, 3 per cent. of oxide of magnesia, and 16 per cent. of the oxide and sulphuret of iron, and are therefore valuable.

The above was by *Boussingault*. More recent analyses, made at the Laboratory of Yale College under charge of professor *Norton;* the analyses by Mr. Bunce, which professor N. says were the results of much careful labor, nearly all of the percentages being the mean of two closely concurring trials. The analyses are of white ash and red ash anthracite coals. We copy from the Albany Cultivator:

	white ash	*red ash*
Insoluble in acids	88 68	85 65
Souble Silica	.09	1 24
Alumina	3 36	4 24
Iron	4 03	5.83
Lime	2 11	.16
Magnesia	.19	2 01
Soda	.22	.16
Potash	16	.11
Phosphoric acid	.20	.27
Sulphuric acid	.86	.43
Chlorine	.09	.01
	99.99	100.11

Having used anthracite coal ashes, and tested their value, we have for years and years recommended their use, and are glad to find that the above analyses, make them richer than those submitted to the test of European chemists.

Peat ashes, when obtainable, will be found eminently serviceable as manure. *Boussingault* found in the ashes of French peat, 6 per cent. of lime, 0.4 of magnesia, 3 7 oxide of iron, 2 3 potash and soda 5.4 sulphuric acid and 0 3 chlorine.

In England, Sir *Humphrey Davy* analyzed peat ashes, containing from ¼ to ⅓ of their entire volume of gypsum, the other constituents being calcareous aluminous and siliceous earth, with variable quantities of sulphate of potassa, a little common salt and sometimes oxide of iron.

Dr. Gray says—and we presume he is speaking of the ashes of the peat of Massachussetts—"Peat ashes contain *carbonate*, *phosphate* and *sulphate of lime*."

Take whichever of these analyses we may, peat ashes are valuable. So, also, is *peat* itself, when decomposed through the agency of animal or alkaline bodies; for according to *Dana*, the average given by the analyses of 10 different specimens, was 24.41 per cent of soluble geine, and 15.55 salts and silicates,—thus disclosing how rich it is in *organic food*, as well as sufficiently so, in that which is *inorganic*.

A word or two as to the manner of burning peat for manure. We believe that it would be most effective, if *charred*, as charcoal is prepared, under a smothered fire.

Broadcast corn.—Your meadows will be bare of grass next month and the succeeding one; prudence therefore, would suggest the propriety of your putting in an acre or so of corn broadcast, to provide provender to soil your milch cows and other stock upon. By such attention, you would be able to take them into winter quarters in good condition, a thing, which every farmer knows is very important. Besides which, you would be able, by feeding them in yards, to accumulate a large amount of rich manure, which would otherwise be wasted by the roadside, or in the woods. If you be provident enough to cover your cattle yards with loam, woods-mould or other rough material, this would absorb the liquid voidings of the cattle, and be converted into the very best kind of manure, as it would have infused into it nitrate of potash and ammonia, phosphates of lime sulphate and carbonate of potash, and urea, which latter substance may be considered as so much ammonia; for every pound of *urea*, will, on decomposition, form a pound of ammonia, equal in value to the carbonate of ammonia of commerce.

Buckwheat may be sown up to the 10 th of this month, with a fair chance of escaping the frost. On poor land. 10 bushels of bones and 10 bushels of ashes, or 200 lbs. of Guano, and 1 bushel of plaster will ensure a good crop.

Fences.—Examine these, and make all necessary repairs, as cattle, when the grass dies out, are very apt to be unruly.

In concluding our remarks for the month, we will avail ourself of the occasion to say to those gentlemen who are connected with the Maryland State Agricultural Society, that it is desirable that the exhibition of the *products of the farm, plantation*, and *orchard, at the approaching* Fair next fall, should be large. Centrally situated as Maryland is,—with every possible means of transportation—immense numbers are attracted to view

her fairs, who, doubtless, come with high expectations of seeing something worthy of being looked at. Such expectations are natural and reasonable, and as they are so, the members of the association should feel themselves bound in duty, to see that they be not disappointed. *Each member should bring something*, as an evidence of his fealty and love to the cause of agriculture. If this patriotic determination should be generally adopted, when the contributions of *each* shall have been brought together, they will form an exhibition as interesting as it will be honorable to those who may have contributed their mites to make up the great aggregate mass. It should be a matter of ambition with each member, to exceed his neighbour in the quantity and quality of his contributions—such ambition, is worthy of all praise—such ambition, is to agriculture, what the blood is to the human system—the principle that gives it vitality, strength, and power.

WORK IN THE GARDEN.

The time has arrived when it is necessary you should give unceasing attention to every part of your garden; for unless your *time* be now well directed—unless you employ every moment in its arrangements, the results may prove disastrous and your fondest hopes and wishes be blighted. This admonition, we feel assured, is unnecessary as it is the province of *woman* to rule supreme in this department of the homestead, and the true woman never omits the performance of any duty which rightfully devolves upon her, and the thought cannot be indulged that she will prove remiss in a spot so cherished by every well regulated mind as is a garden.

For fear, however, that omissions may, in the pressure of household duties, occur, we shall briefly sketch the outlines of what should claim prompt attention.

Cleaning off beds—Clean off the beds whereon you grew your early cauliflowers, cabbages, &c, manure and dig them up, so that they may be ready to receive succeeding crops.

Melons, cucumbers, &c.—Keep all such things clean of weeds: if the weather should prove dry, have them carefully watered.

Melons for mangoes.—Between the 1st and 10th of this month is the proper time for planting melons for mangoes. Manure the compartment you may allot for them with well rotted manure, spade it in a spade deep, rake well, lay off the bed in squares 6 feet apart. At every intersecting point place a spade full of rotten manure 4 inches high, taking care to mix the manure with the soil,—form a hill over it, and plant 8 or 9 seeds in each, one inch deep: have a mixture comprised of equal parts of soot, ashes, and plaster ready, dust the tops of each hill freely, with the mixture, and finish by giving each hill a thorough watering. Continue to water the hills every few days, about sun down, should the weather prove dry, until the plants come up and rain occur.

Cucumbers for pickles.—Prepare a bed as above directed for melons, and plant cucumber seed for a full crop of pickles. The management of this bed should be the same as directed for the melon bed.

Planting out Cabbage plants.—You must avail yourself of the first rain that may occur this month to set out your cabbage plants intended for your late crop. Your bed must be dressed with a heavy portion of strong nutritive manure, which would be the better of having plaster and ashes mixed with it. The cabbage requires to be well fed with rich food, and will not grow in luxuriance without it receives full allowance.

The plants, should a drought occur, must be freely watered every second evening, just before sundown, until they become thoroughly rooted, and rain occurs. Attention must be paid to watering them in dry weather every few days during the whole season.

Before drawing the plants from the seed bed have a mixture prepared in a piggin comprised of mould, soot, flour of sulphur and scotch snuff, bring it to the consistence of cream with water. As you draw the plants from the bed, place them up to the leaves in this mixture; it will serve a double purpose; it will act as a manure to the plants, and preserve them from the cut worm and grub, for however fond they may be of the sweet juice of the stalks of the cabbage plant, they would not touch so bitter a mess as it would prove were they to seek it through the soot, sulphur, and snuff.

Endives.—Set out your plants that may be ready, and sow seed for a late crop. The seed should be sown in an open, cool, moist situation: sow the seed thinly,—and in setting out the plants recollect that success depends upon giving them plenty of rich manure, thorough preparation of the ground, cleanly culture, and oft repeated waterings.

Kidney Beans.—Prepare a bed and plant kidney beans.

Cauliflowers.—Set out your cauliflower plants for winter use. It is best to do so in showery weather, and you must not fail, if dry weather intervenes, to have them watered freely every second evening until a good rain comes; keep the bed clean all the time.

Small sallading, of all kinds, should be sown at intervals of a week, or ten days, throughout the month. Water them with a liberal hand.

Celery.—Set out your plants for a fall and winter crop.

Turnips.—If you wish to have them earlier on the table than you could were you to rely on your liege lord's farm crop, prepare a bed and sow seed any time after the 20th of this month. Manure the bed three or four inches in depth with well rotted manure, have that spaded in spade deep, have the ground well raked, then spread thereon about 1 inch of well rotted manure, have that dug in 4 inches in depth, rake well, sow the seed, and on them sow ashes and plaster, rake the seed and top-dressing lightly in and roll, or have the surface patted with a shovel or spade.

The seed before being sown should be soaked for 12 hours in fish oil, and be rolled in either soot, ashes, lime, or plaster.

When the plants come up, treat them as we have advised in the article in the farm work. But if you want to beat your better half in the earliness of your turnips, see to have them thoroughly watered in times of drought, not forgetting to give them occasional drinks of soot tea, or soap suds.

Ruta-baga Turnips.—Sow a bed of these for use next spring.—for their management, &c., see our advice last month.

Lettuce.—Set out any plants you may have, and sow seed for a successive crop—repeat the sowing every ten days throughout the month.

Spinach.—Towards the end of the month sow a bed for fall use.

Radishes.—Sow radish seed at intervals of 10 days throughout the month.

Early York, Early Battersea.—Seeds of these may now be sown, for greens in the fall: they are delicious and healthful.

Artichokes.—Sucker your artichokes; this encourages the growth of the main head.

Collecting seeds.—As these ripen, collect, put them away in bags; marking each.

Leeks may still be transplanted.

Herbs.—Gather your herbs, dry them in the shade, and carefully bag, mark, and hang them up.

Sage, Hyssop, Thyme, Lavender, and *Winter savory,* &c. may be still set out in slips.

Peas.—Plant a bed for late use. Before planting, the seed should be soaked 5 or 6 hours in warm water. They will be fit for cooking early in September.

Egg-plants, Tomatoes, and Red Peppers may be transplanted during the first week in this month. Give them a soaking watering when you set them out, and continue to water them every evening until rain comes, and in all times of drought.

Savoy Cabbage seed, for winter supply may be sown during the first week in this month. No garden should be without savoy cabbages. After frost they are but little, if any, inferior to cauliflowers.

Budding.—Cherries, plums, &c. should be budded from the 15th to the 20th of this month. Whenever the buds part freely from the wood, is *the* time to bud.

Apricots worked on plum stocks, or on those of its own kind, should be budded this month—those worked on the peach or the almond, it will be better to bud them next month.

Pears may be inoculated towards the latter part of the month.

Budding succeeds best in cloudy weather, and should be performed on the north side of the stocks.

Working, and watering.—Work your beds well, so as to keep down weeds and grass, and be sure to have your watering pot freely used during this month. Cleanliness, an open soil, and plenty of water, should rule the ascendant during this month.

A few words more and our hints for the month shall be brought to a close.

THE MARYLAND STATE AGRICULTURAL SOCIETY'S great fair will be held next fall, and as its members *rely much upon the taste, judgment, and patriotism of the ladies, to give it tone and character,* we thus early apprise them of the fact, in order that they may not be taken by surprise, but have ample time to prepare their contributions, as the *products of the dairy, butter and cheese,* those of the *garden, flowers, fruits, vegetables*—articles of *Embroidery,* articles of *domestic manufactures,* as *linseys, flannels, &c., &c., bread, cakes, conserves, cordials, &c.* In a word, any thing, and every thing, that enters into the household supplies will be acceptably received and gratefully acknowledged by the Society. Knowing the generous natures of those to whom this appeal is made, and the enlightened patriotism which influences all their actions, it is fondly anticipated, that the Ladies upon this occasion, by their contributions, will prove that they are entitled to be esteemed as among the purest patriots of our land. While they are making preparations to render the *Harvest home* of their husbands, brothers, and fathers, a sight on which all may delight to dwell, we trust they will recollect that their own *presence* will be necessary to make the charm complete.

For the American Farmer.

THE RUST AGAIN.

Since you published my communication in your February number, recommending the use of lime as a remedy for the rust in wheat, I have seen in the Agricultural Report of the Patent Office for 1849—50, a lecture delivered by the Rev. Edward Sidney (in the city of Norwich, England, July 18th, 1849) on Parasitic Fungi.

In the course of this, Mr. Sidney says:—"I now propose first to describe the chief of those minute parasitic fungi which injure the corn and grasses of this country, premising that corn plants are themselves only grasses, the seeds of which are sufficiently large for our food. These little pests generally present themselves to the unassisted eye under the form of masses of dust, differently colored, and appear on all parts of the plants except the roots. The stems or straw of our corn plants, and also the leaves, are frequently disfigured by a dark series of patches, constituting true mildew, and called by botanists *puccinia,* from the Greek, πυκα, thickly, because of the dense masses of which it consists. It is found upon reed as well as corn, but the microscope reveals a slight difference in the structure of the spores, by which the *puccinia* of one species of plant is distinguished from that of another. It was imperfectly noticed by Felix Fontana, in 1797, but in 1804 was investigated more clearly under the auspices of Sir Joseph Banks, on account of its ravages during that season, and microscopical drawings, still in the British Museum, were executed by Mr. Bauer. Its common appearance is seen in Plate 5, fig. 4, [these plates are to be found in the Patent Office Report] which represents it on the straw a little magnified. Its appearance under a first rate modern microscope is shown in Plate 5, fig. 5, where you perceive that these dusty patches are crowds of club-shaped fungi, (spores) the thicker end of which is divided into chambers containing the reproductive sporules. They burst through the *epidermis* or upper skin, which they lift up, and the sporules dispersed through the air, have been thought to find entrance through the *stomata* or pores.

"The ground of this notion is, that the patches of mildew are first seen in small cavities immediately beneath these pores, which, as Professor Henslow, (to whom I am indebted for the specimens now before you) observes, certainly looks very much as if the sporules had entered there. With his usual caution, he remarks that "the facts stand in need of proof, and that hitherto the evidence is more in favor of similar fungi being imbibed by the roots of the plants which they attack." We shall shortly see that some experiments on another fungal parasite of wheat tend to show that these fungi are developed in a manner little suspected, even by the cleverest observers."

I will now give you the views of M. DeCandolle, who has advanced the idea that the reproductive powder of fungi (the sporules) is absorbed by the roots of plants with the water from the earth, and that it is carried with the sap to the stem, leaves, and other points of the surface, where it develops itself, and pierces the *epidermis* under favorable circumstances. He founds this hypothesis on the following facts and reasons: 1st, Those organs to which the sap is carried in the greatest abundance are those upon which the fungi develope themselves, for they are always upon the organs exposed to the

air and never upon the roots: 2nd, They disclose themselves, especially in moist seasons, when absorption is most abundant: 3d, They appear most frequently in situations where fungi existed before, and develop themselves more where the ground has been sowed with their reproductive powder (sporules) than where the leaves of plants have been sprinkled with it—DeCandolle goes on to say, that Mr. Benedict Prevost sowed wheat sprinkled with the powder of mildew, and at harvest obtained one mildewed plant in every three, while wheat *not sprinkled* produced but one mildewed plant in every one hundred and fifty: 4. The process of dressing the seed, which consists in sprinkling it with arsenic or sulphate of copper, certainly diminishes the number of mildewed plants, which cannot be understood unless we suppose an action deleterious to the sporules, which would have entered with the saps into the young plants at or after germination.

Sir Joseph Banks, in his pamphlet published in 1805 holds a different opinion from that entertained by the Revd. Edward Sidney, and DeCandolle,—he says: "In order, however to render Mr. Bauer's explanation more easy to be understood, it is necessary to premise that the striped appearance of the surface of a straw, which may be seen with a common magnifying glass, is caused by alternate longitudinal partitions of the bark, the one imperforate, and the others furnished with one or two rows of pores or mouths, which in dry, open or wet weather are well calculated to imbibe fluid whenever the straw is damp. Pores, or mouths similar to these are placed by nature on the surface of the leaves, branches and stems of all perfect plants, a provision no doubt, intended to compensate in some measure, the want of locomotion in vegetables. A plant cannot when thirsty go to the brook and drink, but it can open innumerable orifices, for the reception of every degree of moisture which either falls in the shape of rain and of dew, or is rejected from the mass of fluid always held in solution by the atmosphere; it seldom happens in the dryest season that the night does not afford some refreshment of this kind, to restore the moisture which has been exhausted by the heats of the preceding day. By these pores which exist also on the leaves and glumes, it is presumed that the seeds of the fungus gain admission, and at the bottom of the hollows to which they lead, they germinate and push their minute roots, no doubt (though these have not yet been traced) into the cellular texture beyond the bark, where they draw their nourishment by intercepting the sap that was intended by nature for the nutriment of the grain; the corn of course becomes shrivelled in proportion as the fungi are more or less numerous on the plant; and as the kernel only is extracted from the grain, while the cortical part remains undiminished, the proportion of blighted flour to bran in blighted corn is always reduced in the same degree as the corn is made light. In another paragraph he says: "The chocolate colored blight is little observed until the corn is approaching very nearly to ripeness; it appears then in the field in spots, which increase very rapidly in size, and are in calm weather somewhat circular, as if the disease took its origin from a central position. Some persons think that these fungi cannot be propagated by sporules at all, and maintain that they are the mere fortuitous developments of vegetable matter, called into action by special conditions of light, heat, earth and air, from the following reasons: they grow with a degree of rapidity unknown to other plants, acquiring great volume in the space of a night, and are frequently meteoric, springing up after storms or only in particular states of the atmosphere. It is possible to increase particular species with certainty, by an ascertained mixture of organic and inorganic matter exposed to all known atmospheric conditions, as is proved by the process adopted by gardeners for obtaining agaricus campestris; a process so certain, that no one ever saw any other kind of agaricus produced in mushroom beds; this could not happen if the mushroom seeds or sporules floated in the air, as in that case many species would be necessarily mixed together; they are produced constantly upon the same kind of matter, and nothing else, such as the species that are parasitic upon the leaves: all of which is considered strong evidence of the production of *Fungi* being accidental and not analogous to perfect plants—to such a view inclines the celebrated John Sidney—but whether the sporules are absorbed by the roots of the plants, or by the pores along the surface of the straw, or whether the production of the puccinea is formed by accident, there seems to be no doubt as to the destruction it produces in our wheat crops, and a remedy is what we want—in the absence of a better let me suggest *lime* again—*lime* the seed when sowed, lime the wheat when harvest approaches, and rust is threatened by the peculiar condition of the atmosphere, and I expect good results from it—Mr. Sidney says, dressing the seed with the ley of potash, soda or wood ashes, is useful, and *liming* also has good effect. He says too, "among the antidotes to mildew I venture to name clean farming, amendment of the texture of the soil, ventilation and letting in light, checking over luxuriance in young plants, *growing early* varieties, and avoiding putting on manure directly before wheat, and hoeing the wheat when young"—These are all no doubt very valuable suggestions, but I think lime will destroy the vitality of the sporules if they do vegetate, whether they be absorbed by the stomata or roots, and if the fungus is the fortuitous production spoken of, I think it will reduce the moisture on the straw sufficiently to prevent its formation, if opportunely applied.

BLUE RIDGE.

FAUQUIER, March 18th, 1851.

JERSEY YELLOW TURNIPS—TOBACCO.—A new subscriber who dates from "*Margaretta*," York county, Pa., highly recommends the "*Jersey Yellow turnip*" on account of its retaining its flavor during the spring, whether kept in the ground or not, and for its not becoming *pithy*; though not a great yielder it is as much so as the average of other kinds.

He states also, that "the tobacco culture has for several years been increasing in value in our (York) county," and he thinks will soon reach that of grain crops. He is convinced that its cultivation can only be carried on profitably in that latitude to a limited extent, in connexion with other crops which will afford manure sufficient to renew tobacco ground, and not render necessary any increase of farm-force. The value of the crop of Tobacco in York County, he estimates, in 1850 at $30.000, that of York and Lancaster, jointly, at $150.000. Our correspondent says that his subscription will be for the first copy of an agricultural paper in his neighborhood, but as the farmers become more enlightened in regard to an improvement in their system of husbandry, after a while he hopes to send us a dozen new subscribers from his post office.

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The MARYLAND STATE AGRICULTURAL SOCIETY'S NEXT CATTLE SHOW, will be held in THIS CITY on the 23d, 24th, 25th and 26th SEPT. We expect to accompany this No. with the list of Premiums, &c.

PRIZES FOR THE SEVENTH VOL. OF THE AMERICAN FARMER.

To encourage and stimulate our friends and the well wishers of agricultural improvement, in their endeavors, we offer the following prizes for the largest lists of subscribers, to be received up to 8 o'clock on the first evening of the meeting of the State Agricultural Society, at its annual meeting the ensuing Fall—viz:

PRIZES OFFERED.

For the largest list of subscribers,	$50
" 2d largest list,	35
" 3d do do	25
" 4th do do	15

The subscriptions will be received at the club prices offered by us below, the CASH for which must be paid before the time at which the competition closes. Thus, those who may obtain lists at the regular subscription price of $1, if they will make up a club of 6, will be furnished the same at $5

"	13,	do	do 10
"	30,	do	do 20

One feature of the above offer to be noticed, is, that the names and cash of any who are now subscribers, will be received—heretofore it has been confined to *new* subscribers only.

The Prizes will be paid in cash, or in silver ware, or in any agricultural implements which may be exhibited at the State Exhibition, at manufacturer's prices. The names as received can be sent on, with the cash, and the number will be counted on the day specified, and announced at the time of the giving out the prizes of the State Society. All orders to be addressed to

SAML. SANDS, Publisher,
128 Baltimore street, Baltimore, Md.

To Correspondents.—We have received a communication from our respected correspondent, "T. S. P.," in reply to the remarks we appended to his last favor, and should have been pleased to have been able to insert it in our present number; but as our columns were more than filled at the time of its receipt, we are compelled to deny ourself that pleasure; it shall appear in our next.

☞ The communication of our esteemed correspondent, "T. E. B." shall appear next month.

"W. H. W." of N. Carolina, and reply—"H." of P. Edwards, Va., and a paper on the cultivation of Rye, are in type, and shall appear next month.

"District. No. 7," is received—also a communication from Dr. D. Stewart, of this city, in reply to Dr M. Gross, of Ohio, on "dormant and active ingredients of soils"—we regret that it is utterly out of our power to publish the above in the present No.—they shall have a place in our next.

☞ The paper from Mr. Ruffin, in this No. will, like every thing from his pen, command attention. It is upon an important subject. We regret the necessity of dividing it.

Agents.—Hy. F. Byrne, of St. Michael's District, is authorised to act as agent for Talbot Co. and to receive and receipt for moneys due for the American Farmer. This notification is not intended to interfere with postmasters and others, making up clubs, in their respective neighborhoods.

Wm. Bernard, of Albemarle Co. Va. is also authorised to act as agent for the Farmer.

Matthew W. Tilghman, of Queen Anne's Co. Md. will act as agent for the American Farmer.

R. M. Bridges, of Caroline, and A. Maupin, of Albemarle Co. Va., and P. M. M. Clung, of Tenn. will oblige us by acting as agents for the Farmer—These gentlemen have been very efficient in extending our subscription list in their respective neighborhoods, and we hope they will continue to act for us, or appoint others to do so—Those having accounts with this office, can settle with them.

Other friends who have heretofore acted as agents for us, and post masters generally, are respectfully requested to continue their agency.

In receiving large lists of subscribers from Virginia and Tennessee in 1849, from agents, some omisssions were made in crediting those for whom the cash had been sent—Agents in forwarding lists, sometimes remitted more cash than would pay for the number of subscribers named, and afterwards the names of others were sent on, to make up the amount, and vice versa, which created some confusion in our accounts. Those who may in consequence have received incorrect bills, will have them promptly corrected on notifying us, or the gentlemen to whom they originally subscribed.

In remitting the names of subscribers, agents will please state whether they are new or old, and be *particular* to give the *post office*—Our accounts are kept by post offices, and if this is not attended to much trouble ensues to give proper credits and directions.

Fat Oxen.—We called at the Rising Sun Tavern, in this city, a few weeks ago, to examine some oxen brought to this market, fattened by Mr. Henry Frizzel, of Harford Co.—It is seldom that such fine animals are produced in this state, and they do credit to the enterprising farmer who fattened them, and to the county from whence they came.

Thos. Rowan, Esq. of Sharonsville, Va. in sending us his own and the cash for two new subscribers, adds:—

We are very much pleased with your valuable journal, and since Mr. Ruffin has become a contributor, a very great interest seems to be taken in its success by the farmers in our section. May you succeed to your very best wishes.

TIME OF CUTTING SEED WHEAT.—*R. W. D.* is informed, that the question is not yet decided, whether it is safe to trust unripened wheat for seed; therefore, it is best to let wheat intended for seed, ripen before cutting it.

ESTIMATE OF THE FERTILIZING POWER OF FLESH, &c.—Dana says:—"Taking our arable soils as they usually occur, *one pound* of flesh, *fish*, blood, wool, horn, &c. can fertilize three hundred pounds of common loam."

A striking fact this!—how much farmers lose by permitting dead bodies to lie and pollute the air, instead of enriching their lands with them,—how much those lose, who have fishing shores, but neglect to use them as a means of fertlizing their fields!—*Ed. Am. Farmer.*

HORSE POWER AND THRESHERS.—Mr. Pelton, of Lancaster, Pa., it will be seen by his advertisement in this month's No. offers a new Horse Power and Threshing Machine to the farmers—a number of testimonials from farmers of Lancaster are given in his circular, which can be seen at this office, all testifying as to its power and saving of labor—and the farmers of the old Keystone state, are good judges in such matters.—Mr. Whitman is agent for its sale.

"W. M." whose letter is mailed at Cobham, Va. asks us for information as to the best means of improving his farm of 1000 acres—By subscribing for, and reading the *Farmer*, for one year, which he could obtain for *one dollar*, the information he seeks could no doubt be obtained—It would cost us more than that amount, in the time necessary for the writing of our views upon the subject, which our correspondent has no right to expect, as he says it is "on a subject which cannot possibly interest [us] you," and yet he is not a subscriber to our journal, has taxed us with his postage, and expects us to tax another, perhaps no more interested in the matter than we are, with the postage on our reply!—Such a *liberal* minded man must not expect any other answer to his enquiries than this—we can, and do bear much, but there are some things which we cannot submit to.

To J. H. T. The application of the lime you propose, will not injure the clover; on the contrary, clover will not grow without the soil contains lime.

Five bushels of *bone-dust*, mixed with 5 bushels of *ashes*, and 2 *bushels of salt*, and kept in pie for two months, and then applied, would be the best top-dressing you could give your lands—harrow in the top-dressing, sow the grass-seeds you propose, lightly harrow them in and roll. Let the bone-dust be moistened before it is put in pie, and the heap shoveled over once or twice during the period.

The spring top-dressing you propose, is a judicious one—let the ground be rolled after it.

To H. E. T. Mix, in the proportion of 3 loads of your "pine beards earth from the swamp," to 1 load of stable dung, and 2 loads of marl; let it remain in heap 6 or 8 weeks, occasionally turning it over, so as to encourage the incipient stage of decomposition, before spreading it on the land, and plough it in.

The above compost, applied at the rate of 20 double-horse-cart loads, per acre, would have the happiest effect.

Charcoal, before being applied, should be reduced to powder, when 20 bushels per acre should be applied, the effects of which could not be otherwise than salutary, provided the soil possessed a proper quantity of organic and inorganic matters. Charcoal powder can be advantageously composted with stable or barn-yard manure—in which case, the compost should be ploughed in.

Marl should be applied as a top-dressing after the land is ploughed: it may be either harrowed in, or not—the land, however, should be harrowed, previously, if the marl be not harrowed in.

It gives us pleasure to give such advice to our subscribers, without "*charge.*"

To C. C. B.—We regret our inability to insert his interesting communication this month; it shall appear in our next.

He is informed that 10 bushels of *bone-dust*, 10 bushels of *ashes*, and 2 bushels of *salt*, and 1 bushel of *plaster*, per acre, if made into pie, *left in heap, under cover, for three months*, if gently moistened when put in pie, and shoveled over two or three times, will be sufficient to dress the land he describes, so as to bring it up to a state of fertility. So treated, the bones will tell *efficiently* in his first crop, and continue to act for years.

As to the quantity of Agricultural Salts necessary, we have no personal knowledge, and, therefore, cannot give any directions as to quantity.

GRAND SWEEPSTAKES FOR CORN.—A correspondent in Tennessee proposes a sweepstakes for the whole Union, for the best acre of Corn. We highly commend his project, but the present season is too far advanced. We will publish the communication hereafter, with suitable comments.

THE COAD WHEAT.—Our readers will remember the notice which was taken of a variety of Wheat, which bears the name of the gentleman who had raised a considerable quantity last year from a small package obtained from the Patent Office—the extraordinary qualities awarded to this wheat, created considerable demand for it, and the seed was sold for $4 per bushel, and as high as $10 was offered for it.

A small package was obtained from the patent office in 1846, by Geo. D. Coad, Esq, who presented it to his nephew, J. Edwin Coad, Esq., of Great Mills, St. Mary's Co. Md., who cultivated it in his garden in 1847—the product was a pint and a half—in 1848, 2 bushels—in 1849, about 25 bushels were made, 20 of which were sown, and 5 otherwise disposed of—in 1850, Mr. Coad reaped 300 bushels, 150 of which he sold or distributed gratuitously, and the other 150 bushels were sown, from which his present crop was reaped. Just before harvest, the father of Mr. Coad left with us some of the heads of this wheat, (of which he had also about 40 acres in cultivation,) and the accounts we had received of it, induced us to accept an invitation to visit him, to satisfy ourself of the character of the wheat then growing on his own and on the farm of his son. We arrived there on the 15th June, and found some parts of the field ready for harvesting; we passed through it in various directions, to obtain a fair sample of the whole field, which was brought up and exhibited at the meeting of the State Society on the 18th ult. There is nothing positively known as to the origin of this wheat—as well as can be remembered by the Messrs. Coad, the package from the patent office was labelled, that it was from New York, where 52 bushels to the acre had been raised from it—another account, is, that it was received in a package from Troy. The heads of the wheat are very compact, rather long, with 3 grains in a bar, sometimes 4 are found—the grains unusually large—it is a white and

bearded wheat; the average height of the field was fully 5½ feet, though many stalks were 6½ feet high —the straw is very bright, uncommonly large at the bottom, gradually tapering to the head, where it is very small; this wheat ripens slowly, but is not a late wheat—the grain has improved each successive year since it was cultivated, showing that it is peculiarly suited to our soil and climate. Mr. Coad's soil is principally a white oak, heretofore limed, and the field had from 100 to 200 lbs. of guano to the acre put on it last fall—most of the field was corn ground, the wheat sown after the corn was taken off last year,—it was seeded in Oct., some as late as 15th Nov. and cultivated same as his other wheat—some of it drilled in, (1¼ bush. to the acre,) and some broadcast 1½ to 2 bushels to the acre, but no difference could be found in the field between that where 1¼ and the larger quantity was sown. Last year it escaped the rust, though several other varieties, viz. the China, the old red chaff and Etrurian, in its immediate vicinity, were much injured by it—the Etrurian less than the others. In walking through various portions of the field, we could discern but little difference in any part of it; last year a picked acre, accurately measured, produced 35 bushels; the whole field averaged 25 to the acre—the season was far more favorable this year, and we can hardly be mistaken in saying, that the field will produce an average of 40 bushels to the acre. Mr. Coad has about 100 acres in this variety, and his father, 40. We have never witnessed so glorious a sight, and we doubt if such a field was ever seen in this country before—certainly not in Maryland—the heads contained on an average 75 grains, twice as large as the common grains; some of the heads which were counted, had upwards of 100 grains. We have shown the sample we brought home with us, to gentlemen from the best wheat districts of our own, and the States of New York, Pennsylvania and Virginia, and with but a single exception, they all pronounced it superior to any other they had ever seen. Mr. Coad sold his surplus seed last year, as before remarked, for $4 per bushel, and has numerous orders on hand, some remaining over from last year. He intends sending all he has to sell, to Messrs. Neale & Luckett, of this city, put up in 2 bushel bags, who will sell it at $4 per bushel.

We also brought with us from Col. Coad's, some heads of the Etrurian wheat, which he thinks the best variety he has ever tried except that above noticed—also some of the Florence, which has a short, but very compact head, yielding well.

We have received from Geo. Gale, Esq. of West River, a very fine sample called the 'Thimble wheat' —some Mediterranean from the farm of Pere Wilmer, Esqr's. farm, Queen Ann's Co. and some of the Register wheat, from the farm of Joshua Jessop, Esq. of Baltimore Co. The "Coad" wheat is supposed by some to be the same as the Register—and from the imperfect sample received at this office last year, we so judged—but it is a different variety.

The Charles Co. Times notices several varieties of wheat, of extraordinary growth, from the farms of Mrs. Harris, Mr. John Hamilton, and Gen. Chapman—the latter gentleman, on examining the Coad wheat, thought he could beat it with the variety grown by him, which he describes in the Times, as having been received from the Mohawk valley, in New York, and which he says is more productive than any other variety which he has cultivated—the General has promised to send us a sample of it.

DESTRUCTIVE WHEAT ENEMY.—We call the attention of our readers to the communication of *Alexander Rives*, Esq. which will be found in another part of this month's journal. He describes, with great minuteness, an *insect* that has desolated the wheat in his part of Virginia. He sent us samples of injured wheat; from the appearance of which, we conclude that it has been devastated upon by the same insect which, from about 1807 to 1820, desolated many wheat fields on the Eastern Shore of this State. The disease produced, was then called the "*Sedgy Wheat*"—"the *Stunt*"—"the *Runt*," and was ascribed to a worm, which, as far as we can find, has not been entomologically described. Its effects for years were destructive in the extreme.

The remedies then recommended, were,—burning the stubble—pearing and burning the surface-soil—sowing lime and powdered salt on the field in wheat, in early spring, and rolling the land. Some also recommended, that no wheat should be sown for some years on the infected fields, in order that the worms might be starved out.

The lime and salt were to be carefully sown over the wheat, in the proportion of 5 bushels of each, previous to rolling the land—the lime to be freshly slaked; to which, we would add, an equal quantity of unslaked ashes.

Where the land thus infested was intended for corn the ensuing spring, it was recommended, that the stubble should be burnt over the preceding fall, the land then be subjected to fall ploughing, and receive a dressing of 20 bushels of caustic lime, per acre, which should be harrowed in. In addition to which, in the following spring, before seeding corn, that it should be dressed with 5 bushels of powdered salt per acre.

The late Dr. *Black*, of Delaware, believed that the cause of "stunted wheat" arose from a deficiency of lime in the soil, and that its cure could be effected by its application, aided by putrescent manures, to impart vigor to the plants.

STARCH MANUFACTORY.—We learn from the "*Wool Grower*" that the Corn Starch manufactory of *Oswego, N. York*, consumes 2,000 bushels of *Indian Corn per week*, making 40,000 lbs. of the best starch known, either for the laundry or for cooking, and yielding $120,000 within the year. This new use of corn will, to a considerable extent, increase the demand for the article, as the success of the above enterprise will lead to the establishment of others, and thus will consumption be increased. Heretofore, Wheat and Potatoes were almost exclusively used in starch making.

GEORGIA.—The spirit of improvement is abroad among the agriculturists of our land in every direction. We hail the formation of every new society as an indication of increasing prosperity.

The Murray Co. Agricultural Society was organized at Spring Place, Geo. on the first Tuesday in May, 1851, and the following named gentlemen elected officers for the ensuing year: Dr. Philip Minis, President; A. M. Turner and J. A. Tyler, Esq'rs., Vice Presidents; James Morris, Esq., Treasurer; Dr. J. A. Black, Corresponding Secretary; J. C. Burch, Esq., Recording Secretary.

THE OAT CROP.—The continued cold, dry weather, for the last month or more, we fear has very materially affected the Oat crop—we think, from every indication we have, that the crop will be a very short one.

IMPROVEMENT IN THE WHEAT DRILL.

Having heard that *R. Sinclair, Jr. & Co.* had improved their wheat drill, we visited their establishment some days since to examine and see in what their improvement consisted, knowing full well, that every *alteration* did not effect an improvement. But after a careful examination we are free to confess, that the changes made by these gentlemen are decided improvements, and so we believe they will be found when they come to be tested by the practical wheat grower.

The mode, heretofore, of moving the adjustable cylinders, was by means of a screw, which moved each separately. By their *present plan*, all of the *cylinders* are connected together by a rod, are operated upon at one end by punch screws, by means of which, all the cylinders are either opened or closed by one and the same operation, and so nicely regulated, as that an uniform quantity of seed is thrown into each tube, and the quantity, per acre, to be sown, determined and fixed. The Cylinders are arranged to sow 5 pecks per acre, but it is competent to increase or diminish the quantity by the screws, a difference in the set the 16th of an inch, either increasing or diminishing the quantity to be sown, a peck an acre. These we look upon as valuable points gained, both as to time, and as to practical results.

The TUBES *heretofore* were raised by *separate levers*: —NOW they are elevated, one, or all, by means of grooved rollers on a wrought iron shaft. The grain may be shut off from any of the tubes, or all, as occasion may require. These arrangements, we consider as being eminently useful.

The teeth which heretofore were upon a line, are now placed *zigzag*, so that a part of a cornstalk, or any other obstruction which may come into contact with the front teeth, finds, from the angle of the rear teeth, no difficulty of passing through, thereby securing the unobstructed operation of the drill. This is certainly a result to be appreciated.

Heretofore, the seed tubes were entirely closed, now, by an opening in the hind part of the spouts, the wheat, as it falls, is seen by the operator, so that he has a double chance of seeing whether the grain is being regularly delivered or not, and of correcting, on the instant, any irregularity that may occur. This arrangement is a great security against imperfect drilling, and cannot fail to be promotive of uniformity, in the distribution of the seed wheat in the drills.

We cannnot close this article without admonishing wheat growers, that all lands on which the drill may be intended to be used, should be well prepared—should be reduced to fine tilth by means of the free use of the harrow and roller.

A letter now before us from an enterprising well-judging farmer of St. Mary's County of this state, dated June 12th, '51, addressed to Messrs. R. S. Jr. & Co. says, in speaking of the above drill:

"My wheat is very fine, and the head unusually large, which I attribute in a great measure to the drill you sent me. The most prejudiced observer cannot but admit its superiority when seen alongside of the broadcast. Indeed, with me the difference is most striking, not only in the size of the head, but its whole appearance is superior. I found no underling heads in my Mediterranean wheat this year, and it seems all to be ripening at the same time."

FISH FERTILIZER.—Emery & Co., of Albany, N. Y. advertise a manure under the above name, at $35 per ton, which they state is thought to be "nearly, if not quite equal, to the best Peruvian guano"—that, "by a new process, fish are now prepared so that they retain their fertilizing properties, and are as easily applied as the common guano. The result of repeated analyses by prof. *Norton* is, that it is equal to the general qualities of guano."

We have not seen the analyses of prof. N., but we will say this much, that, if the ammonia has been economized in the preparation of the above fertilizer, we can see no reason why it should not be a most powerful manure—and that any opinion expressed by prof. N. is entitled to the entire confidence of farmers, as he is both able and conscientious. And we will further say to those who have fishing shores, and the facility for catching fish, that they need not go abroad to purchase guano or any other fertilizers, as by composting fish with marsh or river mud, ashes and plaster, they may make a manure equally as powerful as any other fertilizer extant. Fish abounds in ammonia and bone earth, the two substances which give to guano its greatest value, while the mud, plaster and ashes, will supply valuable substances not to be found in guano, or only in traces. If the owners of river farms would rely upon their own resources, and exert a becoming enterprise, they could find every thing at home to render their lands as rich as garden spots.

For the American Farmer.

A GREAT YIELD OF MILK.—Dr. Perkins, of Smyrna, Kent county, Delaware, has a small native cow, from which he obtained 24¼ gallons of milk in three days of last month, the 23d, 24th and 25th of April, 1851. On the second day's trial she gave 8 gallons and 7 pints, say 35 quarts and 1 pint.

The Dr. intended to have continued the trial for one week, but by a little mismanagement of his dairy maid, she fell off in quantity after the second day's milking. The Dr. was induced to make this trial of his cow's milk-giving qualities, from the fact that she gave five gallons of milk per day without any other feed than the luxuriant pasture for which the lots in the vicinity of Smyrna are so famous. During the trial, the cow was milked four times a day, and was fed with Indian meal. Here might have been the mistake. The Dr. might have ordered an over-dose of the meal, as physicians sometimes give the wrong medicine, as well as sometimes take a little more blood from their patients than the state of their disease would seem to justify.

This cow had no particular pedigree, only that she was a native of Kent county, which originally flowed with milk and honey, and which now seems to be returning to her former fertility. Her color, however, indicated that some of her ancestors had originally belonged to the highly improved stock of the late Gen. Emory, of Queen Anne's county, Md.

BETTER STILL.—Mr. Cummings, of Smyrna, has a cow from which he obtained a bushel, or 8 gallons per day, about the same time as that of the above, *without trying*. Mr. Cummings' cow is of the highly improved stock of Devons of Devondale.

N. B. C. P. Holcomb, of Devondale, bids fair to succeed as well in his favorite pursuit of changing the color and improving the stock of horned cattle in Delaware, as the celebrated Coke, of Holcomb, was in his laudable determination of improving the whole agriculture of England.

JOHN JONES, *of Del.*

ESSAYS
ON
Various Subjects of Practical Farming.

BY EDMUND RUFFIN, OF VA.

THE ADVANTAGES OF PLOUGHING LAND IN WIDE BEDS, COMPARED TO THE ORDINARY NARROW BEDS.

Where land is so nearly of level surface that surplus rain water cannot flow off, and of such clayey or close texture that the water cannot readily sink, then it is essential, with a view to its proper drainage, that the land shall be ploughed and cultivated in beds, or, as it has been designated, in "ridge and furrow." Sandy or other pervious soils and sub-soils, even if of level surface, do not need ridging for the draining effect; and neither do lands of undulating surface, even though of clay soil, as the surplus water will readily flow off along the descending slopes. Still, because of some real and for other alleged (and very questionable) facilities afforded by the usual "ridge and furrow" system to corn-culture, and, more generally, merely because of the influence of example, and the power of established habits, this practice has been extended not only to many of the most sandy soils, but also to rolling and even hilly surfaces, where ridges and water-furrows are either useless or injurious. On the broad and rich sandy flats bordering the Rappahannock, where Indian corn is the principal crop raised for market, tillage in narrow beds (5 or 5½ feet usually) has long been universal—and also in other parts of lower Virginia, of soil and cropping of somewhat like character. It is there universally understood that corn-culture in such narrow ridges is the cheapest, and also the most productive of crop. As the cultivators of such lands are comparatively but small producers of wheat, and smaller of clover and other highland grasses for mowing, they are willing to submit to the inconveniences of narrow beds for these latter crops, in consideration of the greater benefits supposed to be derived from the system for their most important crop, corn. In some other places, where wheat is a much more important crop, some farmers throw two of the narrow corn-beds into one when ploughing for wheat, thus making them, for that crop, of double width, or 10 or 11 feet. But this change is objected to by the greater number, (and with good reason,) as yielding the peculiar advantages they claim for the narrow bed culture, and requiring more trouble to bring back the doubled beds to single, when the land is again to be prepared for corn-culture.

On the rich and extensive and celebrated "low-grounds" of Gloucester county, Virginia, this narrow bed culture is universal. All these lands are so nearly level, that the slight natural inequalities of surface, even with all the aid of open ditches, would afford very insufficient "fall" and discharge by flowing off, for surface water. Most of the soils and sub-soils are also close, and retentive of water—or every field is partly so constituted—so that the surplus rain-water cannot be discharged by sinking or filtration. Hence, culture in beds and furrows is there indispensable. And to this sound general proposition, universal opinion there adds the much superior efficacy of very narrow beds, to any of greater width. Even the putting together two of the corn beds, for the following wheat crop, is deemed a great damage to the previous better drainage—and many facts have been adduced of such trials and their unfavorable results. Of course, if deeming hurtful to drainage the increase of width of the beds to 10 feet only, it was inferred that any greater width would be, in proportion, so much the less efficient for drainage.

Though opposing these claims for the superior draining operation of narrow beds, in preference to broad, I readily admit that the first effect of putting together two narrow corn-beds, for sowing wheat, is very objectionable—not only as causing worse drainage, but also a worse production of wheat even if there were no defect of drainage. If the narrow beds had been previously raised (as is usual,) by ploughing the corn with mould-board ploughs, so that there is a difference of 6 or 7 inches in the respective levels of the middle of the ridge and the water-furrow, (or "alley,") it will require very deep ploughing to fill completely the old water-furrow in the middle of the new doubled bed. With ordinary good ploughing, for this purpose, there will in most cases be a depression left there, which on a close soil may retain rain-water on the surface. And whether this evil to drainage is produced, or not, the deep ploughing thus required to be given to prepare corn-land for wheat, so short a time before seeding, will be worse for the yield of the wheat, than the ordinary less laborious and much shallower ploughing. This is not the place to discuss this opinion thus incidentally mentioned. I will therefore not occupy here more space than for the mere enunciation of my opinion, founded on experience and observation, that the deep ploughing of corn land, to prepare for wheat, is not only a useless waste of labor, but is absolutely a detriment to the production of the land, for the ensuing crop, compared to shallow and apparently more imperfect ploughing. With these views, it is not difficult for me to concur in the objection made by other farmers to the doubling of corn-beds for wheat. But this concurrence is by no means an admission of the general proposition that the narrowest beds drain better, or produce more, than the wider. On the contrary, I have long maintained that beds as wide as 25 feet are better for drainage than any of less width—and that the narrower the beds are, the less is their draining operation, under ordinary circumstances.

To discuss this question, it is not proper, or fair, to refer for examples to level lands of sandy and pervious soil and sub-soil, where bedding is not necessary for drainage, and is only a (supposed) facility for the tillage of corn Still less is it proper to have in view sloping lands, where water-furrows are not only useless, but injurious—and those which would drain most effectually elsewhere, would there cause the most injury by being washed into gullies. The only proper subject for consideration is land of surface so nearly level, and soil or sub-soil so retentive, that, in the opinions of all persons, cultivation in beds and furrows is necessary for the proper drainage. In regard to such grounds, the question will be simply the width of the beds, and whether the narrow or the wide beds will drain better, and be more convenient for the cultivation of the land. I will endeavor to state fully and fairly the grounds assumed by the advocates of narrow beds, (and they are nearly all of those who cultivate in beds of any kind—) and afterwards present my opposing views, and my rea-

sons for preferring very wide to the usually very narrow beds. For convenience of reference, and comparison, I shall assume the narrow beds to be 5 feet, and the wide to be 25 in width. But in some places (as in the well-farmed lands of Talbot county, Maryland,) beds of 4 feet width only are general—and some of my own fields are in beds as wide as 27½ feet.

The reasons urged in favor of the superiority of narrow beds, both in reference to drainage and tillage, so far as I know them, will be presented as follows: First, as to drainage, the advocates maintain, that each water-furrow acts as a surface drain, or small ditch, and the more frequent and numerous they are, the more quickly and effectually will they draw off the surplus surface water, and discharge it into the cross grips and larger ditches There is, then, a surface-drain for every width of 5 feet throughout the field—and every part of the surface is within 2½ feet, or less, of a surface drain. Of course, if these alleys are kept open, and discharging, any surcharge of rain-water must be speedily discharged—and more so than in any greater width of beds, because the wider the bed, the more level (or less sloping from its crown to the furrows) will be its surface, and the longer distance must the surplus water pass before reaching a water-furrow, and thence run off. If compared to beds as wide as 25 feet, the latter must be so much less rounded, and less elevated, (in proportion to the greater width,) that their surfaces will be almost like flush ploughing, or as if there were no water-furrows. Next, as to advantages of tillage. The land having been left, after the last grain crop (whether corn, or a succeeding crop of wheat or oats,) in the usual narrow beds, these are ploughed so as to be "reversed" for the next crop. For this purpose, two furrow-slices are thrown together, to meet or to lap, upon the former alley, the middle of which, a strip of 12 or 15 inches wide, is thus not ploughed, but merely covered by the meeting slices, or "list." So two furrows of a two-mule plough cut and cover a width of 3 to 3½ feet—and two more furrows usually can complete the full width of 5 feet. Besides this saving of labor (in leaving the former alley unbroken,) there is a higher, drier, and warmer seed-bed furnished to the row of corn, to be planted along the raised list, or crown of the narrow bed—which, with equal depth of ploughing, will be the higher, compared to the adjacent water-furrows, in proportion to the narrowness of the bed. The young plants of corn, by their more rapid early growth, give evidence of the greater warmth of their elevated position.

The only opponents which have heretofore called out the arguments for narrow beds, were those farmers who had lands permitting flush cultivation, and who, for their own circumstances, and very properly, opposed all bedding. But in advocating very wide beds, for all crops, so far as I am informed, I stood alone when my then theoretical views were just published in 1838, (Farmers' Register, vol. iv. p. 185;) and in my later and present general practice in that respect I have as yet but few co-laborers. My opinions have remained the same, from a still earlier time than their first publication. But the generally broken and sloping surfaces which I formerly cultivated, permitted no use of beds, (except on a very small space of bottom land,) and it was not until within the few last years that a different location, on level land, has enabled me to adopt wide beds in my general practice. Since then, nearly all my cultivation has been on this plan, and which will be extended to all land requiring or even permitting bedding, as fast as the fields will successively come under tillage.

On the plan of narrow beds, there certainly are some savings of tillage labor, and some other advantages in corn-culture—together with as great disadvantages for other (broad-cast) crops. But neither these advantages or disadvantages do I consider as of much importance to the question of preference. Good drainage is so much more important, and even as a facility to tillage itself, that my preference for wide beds will be placed mainly on the ground of their affording better drainage.—In general, that shape of the surface which gives the most perfect drainage, will also allow the easiest and most perfect tillage labors, and also yield the best product. The land to be considered being supposed already under tillage, it is to be understood that it has been drained by proper ditches, where needed, and that the proper bedding and furrowing is all that is required to complete the drainage. The question is, whether that object will be best promoted by narrow beds and water-furrows, or by wide beds and deeper though more distant water-furrows.

In theory, or in description, the narrow beds promise well. They are always referred to, by their advocates, as if in their most perfect condition. The water-furrows, at the close of the corn tillage, and also when the land has been sown in wheat or oats, are supposed to have been left open, and cleanly swept by the plough, without any obstruction to the passage of water, yet narrow, so as not to cause much lost space—and that there has been given to every one a good outlet and discharge into the ditch receiving its surplus water. All this would require much more care and labor than is ever bestowed in practice—and more than can usually be given without more loss than profit. It is true that as much care is required for the water-furrows of wide beds. But it can be more cheaply and also more effectually applied to one water-furrow than to five. Besides this reduction of the number to one-fifth, the wide beds are never to be reversed, as are the narrow—and consequently, the labor of graduating their bottoms, opening their outlets, and removing any obstructions in their courses, is not lost or counteracted in every return of the corn crop.

In general practice, (and of course referring to level and retentive soils, as those of Gloucester,) instead of the perfection above stated, in winter and all very wet seasons, the water-furrows are in numerous places receptacles for small and narrow and very shallow pools of remaining rain-water, which have no lower outlet, and must remain until removed by evaporation, and the very slow absorption by a close and perhaps already saturated subsoil. These pools of standing water may not be an inch deep. Still as they are so little depressed in level as to be in contact with the upper soil, and as they are scattered profusely over the field, it may be inferred that the upper soil soaks up, by capillary attraction, most of the water so left after rains. Even if the most perfect condition, as described above, were ever attained in practice, and before the last tillage of the corn-crop is finished, the next tillage process must destroy, or greatly impair that good condition. When thus choked by the passage

of the plough or harrow, the water-furrows of course may be cleaned out. But if a heavy rain should fall before such cleaning out of the water-furrows, the land is as little prepared to discharge the surplus water as if no beds or alleys had been made. Indeed, in such cases, or where the bedding has been badly executed, the water-furrows are so generally obstructed, as to be no better than hollows, which serve, not so much to discharge, as to receive and retain the excess of rain water.

It is obvious that, with even the same depth of ploughing, wide beds will be raised and remain higher, and their water-furrows be sunk deeper, or will remain so, than with narrow beds. Even if the latter are raised as much as possible, and to a height inconvenient for tillage, the earth cannot remain in that shape. It will be levelled by subsequent tillage processes, by the washing of rains, &c. until reduced to the ordinary height of the settling, which is only about 5 or 6 inches of perpendicular height, from the bottom of the furrow, when it had been well cleared out by the plough, to the level of the crown, of a bed of 5 feet. In Talbot county, I measured the height of the 4 feet beds, in more than one well cultivated field, and found the general difference of level, of water-furrow and ridge, to be 4 inches. But the water-furrows of these beds had not been cleaned out by a finishing passage of a plough, and, though necessarily of thinner soil, and of lower surface, they were yet of tilled or pulverized earth. Such is usually the case, in all narrow bedding; and therefore the draining operation of the water-furrows is as much lessened, compared to the condition of their being swept out by a narrow closing furrow down to the compact and naked sub-soil. Compared with these usual heights of different narrow beds, respectively of 4, 5, or at most 6 inches, a 25-feet bed, if as much raised in proportion to its width, might be 25 inches high, and yet not have greater slope of its sides than the narrow beds. But so much height is not required for drainage, and would be inconvenient and injurious, in other respects. In my practice the height of the beds (above the bottoms of the water-furrows,) usually vary between 12 and 16 inches. This depth is generally enough for surface drainage, and not enough to be inconvenient or injurious in other respects.

I have spoken of the space occupied by the water-furrow as being so much land usually lost to the crop, (especially of wheat.) This is denied by the advocates of narrow beds; and they adduce, as proof, that the wheat plants in the bottoms of water-furrows often or mostly survive the effects of the water, and yield a somewhat inferior product. In Talbot, late in November, the water-furrows, (which were not opened by a plough after the seeding,) were indeed well set with plants; and I was informed that on good land, at harvest, the water-furrows could scarcely be distinguished by the difference of height of the standing wheat.—But admitting (as I do readily,) all these statements, they only go to prove that such land did not need to be bedded, or to have water-furrows for drainage at every 4 or 5 feet distance. Upon the best executed and effective bedding, surely the bottoms of the water-furrows must be more exposed to damage from water than would be the whole surface, if there were no water-furrows. But, if water-furrows are required for drainage, I do not think it desirable that the whole alley should bear plants. It seems preferable that they should be absent on a narrow, clean, and deep furrow, both for better drainage, and for better production. But if indeed the water-furrow, whether in producing mean and sickly plants, or none, is really a loss of soil and of crop, in proportion to the space it occupies, it is much better to have but one, though that one is larger and deeper, than the five or six of narrow beds.

[To be concluded.]

CULTURE OF RYE.

"Enquirer" asks,—"*why it is that the Rye-crop has fallen off so within the last seven or eight years?*"

This question we are unable to answer with any degree of certainty; but presume, that a part of the cause of failure, may be found in the fact, that this crop is most generally grown upon a worn-out old-field, wherein there is but little nourishment for the plants to eat and fatten on—wherein there is comparatively nothing to form their grains out of. The general complaint is,—plenty of straw, but little grain! And can it be wondered at?

According to Sprengel's analysis, the ash of Rye, grain, and straw, contains in every 1000 lbs. the following inorganic substances. This, it must be recollected, is independent of the *organic* part, viz:

	Grain.	Straw.
Potash }	5.32	0.32
Soda }		0.11
Lime	1.22	1.78
Magnesia	1.78	0.12
Alumina }	0.24 }	0.25
Oxide of iron	0.42 }	
Oxide of manganese	0.34	
Silica	1.64	22.97
Sulphuric acid	0.23	1.70
Phosphoric acid	0.46	0.51
Chlorine	0.09	0.17
	11.74	27.93

The above *inorganic* substances, make, together, but 39.67 lbs., they are, though small in quantity, *all* important to the produce of the plant, and, therefore, must be in the soil, to yield supplies in the progress of the growth of the crop,—the remaining 960.33 lbs. of the thousand, are *organic* substances, such as pass off into the air, when any body is burnt. These latter bodies, consisting of starch, albumen, mucilage, saccharine matter, gluten, &c. are derived in part from the *earth*, and in part from the *air*. From the time, however, that the *grain* begins to form, we think there cannot be a doubt, but that the supply comes in a great measure from the soil, as from the arid condition of the *stalks* and *leaves*, from that period up to the maturation of the grain, their powers of absorption are too feeble to derive much, if any, benefit from the atmosphere. It follows then, as a natural deduction from the premises, that supplies of nutrimental food, as well as that of an *inorganic* nature, must be present in the earth, ready at all times to yield to the demands of the plants, as they advance in their growth towards maturity. And it is equally reasonable, that if they be not therein, the work of vegetation will be but imperfectly performed. The horse, and the ox, that labors, must be fed, or their powers to toil will become exhausted. So also, is it with the Rye plant; it must be fed with its appropriate food, or it cannot perform its offices —it cannot perfect its seeds—it may yield sufficiency of straw, but, without the proper substances be in the soil, to form the grain, it is unreasonable

to expect a good yield, as it is contrary to the laws of nature, that something can be made out of nothing. The *air*, to be sure, performs a part of the process of furnishing organic material; but it *never* was intended that it should furnish *all*. The earth is wisely ordained to do a certain portion of the work, but its capability for the performance of its share, does not rest upon itself, but upon its owner. If he subjects it to a course of killing culture—if he tax it year after year, with crop after crop, and return nothing to it in the shape of manures, the inevitable effect will be, the destruction of its capacity for production—for exhaustion must follow such a course of abstraction. Therefore, he who expects the earth to bring forth fruits in perfection, and in abundance, must feed it, and thus provide the substances to make them out of. It is, however, opportune to the occasion to remark, that if long continued cold rains and winds occur at the time when the rye is in flower, that these causes may, and doubtless do, operate to prevent fecundation, and consequently decrease the quantity of grain produced. But as it is the part of prudence, to provide against all sorts of contingencies, it is always safest to provide this grain with a moderate allowance of food, whenever it may be sown on land known to be poor.

We shall now turn our attention to the subject of how the deficiencies of the soil, may, to a sufficient extent, be supplied. In the prescriptions we shall give, our object will simply be, to impart to the earth the present power of production—that is, to administer to it such doses, as, under favorable circumstances of season, will secure a good crop of Rye.

If our correspondent will give to each acre which he intends to seed to Rye, either of the following mixtures, he cannot fail, unless the elements combine against him, to be rewarded by a remunerating crop.

1. 150 lbs. of Guano, and
   ½ a bushel of plaster,—

to be mixed together, and ploughed in.

2. 2 bushels of bones,
   4 bushels unleached, or 8 bushels leached, ashes, and
   25 lbs. Nitrate of Soda,—

to be mixed together, (the bones to be first moistened) and left in a heap for a week or so before being used, and then harrowed in with the seed rye.

3. 4 bushels of bones,
   10 bushels of ashes, and
   3 gallons of common fish oil,—

to be mixed together, left in the heap for a week or ten days, and then harrowed in with the seed rye.

4. 10 double horse loads of marsh, or river mud, and
   10 bushels of leached ashes,—

to be formed into compost, and remain four or five weeks in heap, the heap then to be shoveled over; the compost to be ploughed in, say 8 inches deep, and the ground thoroughly harrowed.

In each case, after harrowing in the seed, the ground should be rolled.

If the rye should become too "proud" or "rank," as it is termed, it would be well to turn sheep and calves on it, late in the fall, in winter, or very early in spring, to eat it down, when the ground is sufficiently dry not to be poachy.

In turning these animals on the Rye, care must be observed. At first they should not be permitted to remain on for more than an hour at a time, increasing the period an hour, daily, for a week or so, when they may be left on all day, but removed at night.

They should not be suffered to be on the grain in wet weather.

A practice has gained considerable popularity with many rye growers, to sow a peck or half a bushel of buckwheat, per acre, at the time of seeding the rye—which should be done from the 1st, to the 12th or 15th of August. The buckwheat grows until the first frost, which cuts it down, and, by its fall, affords a covering to the Rye through the winter. So soon as the frost is out of the ground in spring, and is sufficiently firm to bear the team, without danger from poaching, a heavy roller is passed over the field; the effect of which, is, to compress the stalks of the buckwheat to the earth, where it lies, keeping up a healthful moisture in the earth, by its smother, throughout the season; thereby increasing its powers of absorption, and, by slow decay, affording more or less nourishment to the rye-crop, and thus encouraging its growth.

After the harvest is secured, the custom is, to plough the stubble in together with the body of decomposing buckwheat, which process, it is said, tends very materially to improve the land. In this way, we have been told, the same field has been made to produce several successive crops of rye,—the buckwheat and stubble turned in, being considered as equal to a light dressing of barn-yard manure.

The theory is, that from its peculiar construction of leaves, buckwheat draws most of its organic food from the atmosphere, which, by being ploughed in, materially increases the stock in the earth, while it also restores all the inorganic substances it may have drawn therefrom in the course of its growth.

Though we have it upon the very best authority, that 7 successive crops of wheat, have been taken from the same lot, by the aid of stable manure and ashes, and that the average product for the 7 years, from ten acres, was over 40 bushels to the acre, we do not approve of the plan of growing the same crop, on the same land, from year to year, without an intermediate crop of another kind, and, therefore, cannot sanction the practice of growing several successive crops of rye on the same land, as mentioned above.

We think too, where the progressive improvement of the soil is contemplated, that a crop of buckwheat should be seeded so soon as the rye is off the field, to be ploughed in just before it was time to seed in rye again, and that upon such resowings, four or five bushels of ashes, one of plaster, and two of salt, should be sowed broadcast, and harrowed in with the seed.

This system of reserving a field for rye alone, we are told, arose from the fact, that rye grown on the same land whereon wheat was cultivated, frequently, by its *volunteers*, arising from the scattered grains, impaired, by admixture, the market value of the wheat. There is something laudable in the reason of the practice, but we question the propriety of the policy.

Rye may be covered either with the seed plough, or harrow. Whichever implement may be used, the seed should be buried from 2 to 3 inches—the water-furrows then formed, and the field be rolled across the furrows, with a heavy roller.

Quantity of seed per acre. The custom is to sow

a bushel to the acre, but we would recommend from 5 to 6 pecks to that quantity of land.

A NEW ENEMY TO THE WHEAT.

CAROLTON, 6th June, 1851.

To the Editor of the American Farmer—

DEAR SIR:—On my return from the spring terms of our courts, I hasten to submit for your examination, some specimens of wheat-plants, destroyed by an insect that made its first appearance in this county three years ago. I am impelled to this step by my desire to elicit from you or your correspondents, any information you may have respecting the history and habits of this most formidable enemy to the wheat crop. When I first heard of it three years ago, it was confined to a neighborhood some twelve miles distant from me, in the northern part of this county. Its ravages in that locality were then most serious. It has gradually spread around, until it now embraces nearly the whole of the northern half of the county—an area of some thirty miles by fifteen. I have heard, also, that its depredations exist in several counties to the north-east of this county.

So far from passing away from the scenes of its first devastations, this insect has greatly multiplied there, and has annually more and more blighted the prospects of the harvest. Its effects are this year so disastrous as to fill with dismay and despair all who rely on this great staple. Whole fields are so devastated by its attacks, that the wheat has the appearance of a low, stunted, decaying sedge, with a few straggling heads of wheat, which, if they should, by chance, fructify and ripen, would scarcely reward the labor of seeking and gathering them. Many farmers scarcely dare hope for more than their seed and bread; and no sick e will be borne into many fields. Hence, if this insect is to continue with us, it will be rash to sow this crop; and the height of imprudence to bestow on it those costly manures that are now so profitably applied to increase its yield.

We, therefore, turn with great anxiety to others, to enquire after their experience of this new enemy, and to solicit whatever information may be acquired in your columns, to regulate our future dependence on this staple. You will perceive from the plants herewith sent you, that the injurious deposit is made in the leaf or shuck of the wheat near the joint from which it starts.* The puncture of the leaf seems to render it diseased; cells are thereby formed in its structure, where the maggots lay enveloped, and its substance becomes so swollen out, indurated and knotty, that it bends the stalk so as to form a knee, and thus topple down the head; or else so completely clamps the head-stalk, as to forbid its emerging from the *boot;* and in every instance so perfectly compresses and strangles the stalk and its juices, as finally to extinguish all its vitality. If with due care you will gradually pare away these knots, you will come upon the cells and their inmates, that are just now very minute, but manifest enough to be discerned by the unaided eye. When the straw is thoroughly dry, say in July and August, this maggot has attained greater development, and you will find from four to ten worms to the joint, in a state of fuller life and activity. Before the winter, it passes into the chrysalis state, in which it securely hibernates in the straw, till the first or middle of May, when it emerges as a fly. I have not seen it as a fly, but it is described to me, as a small dark gnat, with a body somewhat like an ant, and small wings, not seeming to possess much activity or power of flight. Hence, its work is most thorough on the borders of the fields it enters; and it does not always penetrate to the midst of them, especially if large. Many of my friends, by keeping these diseased joints in a glass jar till May, have succeeded in procuring the fly, but have not favored me with any such accurate description of it, as would convey a distinctive idea of it to the entomologist. Like most insects of this kind, it commences, as soon as winged, its work of propagation, and destroys our wheat, while it seeks a comfortable nidus for its young.

This insect is now known with us by the name of the *joint-worm.* I hope your researches will enable you to inform us how it is classed by naturalists, and whether it has been, at any time, as destructive elsewhere as here.

The Hessian Fly (*cecydomia destructor,*) and the Grain-worm (*tipula tritici*) are comparatively harmless, in view of the fearful ravages of this insect. True, the grain-worm is only known to me by the accounts given of it and its works in G. Britain and New York; it has never yet appeared among us. But assuming the worst descriptions of its ravages to be true, and with a full experience of the destruction committed by the Hessian fly, I have no hesitation in pronouncing them both far less injurious than this new enemy.

Before, therefore, we can determine whether we shall hereafter aim to raise this staple, it is very desirable to know, either how we can relieve ourselves of this insect, or when we may, by analogy from the periodical gluts of chinch-bugs, &c. expect this scourge to pass from us.

The stubble and straw of the wheat crop will store away myriads of these insects to re-commence another year the same work of destruction. I have suggested to my neighbors the propriety of burning over our stubble fields in the close of the autumn, and committing to the flames all the straw that might be left unconsumed by the cattle by the middle of March. Perhaps, too, an early seeding might push the wheat in the spring so forward as to escape the deposit in May; but in this, we encounter increased danger from the Hessian fly in the Fall. Many of our sufferers despair of any remedy or relief, and will not have the courage to sow more in the fall than will give them seed in case of the disappearance of this worm.

I need not caution you, after satisfying your curiosity about these embryo destroyers of the staff of life, to take especial pains that they shall not survive to plant their hateful brood in your wheat field. Most respectfully, yours, &c.

ALEX. RIVES.

*The specimens sent were too dry when received to afford any data to judge by.

We would be gratified to hear from any of our correspondents, who can give information as to the characteristics of this insect.

SAVING CORN FODDER.

To the Editor of the American Farmer:

DEAR SIR:—Permit an humble subscriber to make a few comments upon the article, from the pen of Edmund Ruffin, of Va., which appeared in the May number of your paper. He makes some excellent remarks about the loss of grain, the loss of time, and danger to health from gathering fodder after the usual method. From some experiments, the loss in grain was found to be twenty per

cent.; if it were less, it would still be very great. Mr. Ruffin's mode, however, only offers one slight advantage: the saving of time at the period when wheat sowing is taking place on the farm. He cannot leave the land much cleaner unless he cuts the stalks off close to the ground. The usual method is, to cut above the ear, and his, to cut just below it. What material difference in a stalk of three, or one of five feet in height, left on the ground? If he makes better grain, according to his own theory, he will not make as good fodder, and if the fodder is better, the grain is not so good. Besides, he has the great labor of gathering the corn from the stalks in the shock. I call it great labor, because it is so tedious when compared to the plan of gathering from standing stalks. His cattle would much prefer to have the blades given to them separate from the stalks. He admits some danger from mouldiness when the weather is damp, and I suspect that on account of a musty odor being so very penetrative, that corn in a shock is very apt to be injured in flavor. Practical men will see that his method only saves a little time, when it is needed for seeding wheat. Long experience has made many farmers give up the plan of seeding wheat in corn. It has many disadvantages, and ought only to be practised by those who have small farms, and cannot sow a sufficient quantity of fallow ground to make a large crop. If the corn is left undisturbed, there may be a gain of twenty per cent. in grain. Then why not leave it undisturbed until ripe? and the labor of gathering tops and pulling blades will be saved; so will exposure to dew, &c. be avoided. Mr. R.'s plan is not a good substitute for the old one; many will think the old method preferable. What is a substitute and a good one? An acre or two, or three, if necessary, sown broadcast with corn, and cut for fodder when three or four feet high. The ground ought to be very rich. An acre or two of such corn, cut green and dried, will furnish several tons of the very best food for horses and cattle. According to Mr. R., the fodder saved is not equal to the value of the grain lost by one-half, consequently there would be a loss of ten per cent. any how, which, in a large crop, would be tremendous. Mr. R. does not state a loss of exactly so much, but his remarks show that the loss is not less than ten per cent, when the fodder is gathered from the stalks. So a farmer will gain about $50 on every thousand bushels of grain, if he lets his corn-field be undisturbed until the grain is ripe, and saves the labor of gathering fodder. How the cattle would rejoice if this $50 worth of corn were given to them! They would be satisfied with much less fodder. Broadcast corn can be sown any time in summer, and cut when there is an appearance of a day or two fair sunny weather. The usual plan of saving other fodder, when dry, will suit it. For convenience, it would be well to put it up in bundles.

If wheat has to be sown in the corn ground, it would be advisable to cut down stalks and all, the nearer the ground the better for seeding well, and shock the corn, or set against a safe fence, as some do. It is very unadvisable for persons with land in plenty, to sow wheat in corn ground. Let the corn ripen as nature intended, and let the refuse go to the manure pile. G. H.

THE WHEAT HARVEST.—From almost every section of our country, we have a most gratifying account of the Wheat Harvest. The yield will no doubt be greater than has been gathered for many years, and the quality unsurpassed.

GUANO FOR WHEAT AND CORN.

UPPERVILLE, Fauquier Co., Va., June 4, 1851.

To the Editor of the American Farmer.

I have never used Guano on my land, but intend to do so next fall. You will please answer the following questions in the July No. of the Farmer:

Would it be proper to fallow your land, harrow it, and sow the Guano, or Guano and plaster, with the Wheat, and put them in with the shovel plows?

How deep ought Guano to be put in the ground?

Where it is sown on corn land, what is the best mode of putting it in?

How many pounds of Guano ought to be put on one acre?

Give such other information as you may deem proper. Yours, respectfully, L.

REPLIES TO THE ABOVE QUERTIONS.

1. The guano should be mixed with plaster, at the rate of 100 lbs. of guano to 25 lbs. of plaster, sown broadcast, and ploughed in as soon after as possible; the ground then to be harrowed until a fine tilth is obtained, preparatory to sowing the wheat, which may be either ploughed or harrowed in, provided the seed is not covered more than 2 or 3 inches. Water furrows should be then formed, and the field rolled across the furrows. Unless the soil be very poor, 200 lbs. of guano will be enough —if very poor, 300 lbs. to the acre should be applied. The depth of the furrow is not material, as the plants will find the guano whether covered 4, 6 or 8 inches.

For *Corn*, the Guano and plaster should be mixed together, as above, sown broadcast, and ploughed in.

Corn being a heavy feeder, 400 lbs. of guano to the acre will not be too much. The ground, after the guano is ploughed in, should be top-dressed with from 5 to 10 bushels of ashes per acre, as there is but a comparatively small per centum of potash in guano—sometimes a mere trace—and corn is emphatically a potash plant. 200 lbs. of Guano, with the usual allowance of barn-yard manure, would answer; but in any event corn ground should always receive a dressing of ashes, potash being essential to the success of the crop.

M'CORMICK'S REAPER.

WATERLOO, May, 1851.

To the Editor of the American Farmer—

SIR—I consider it but an act of justice, as well to Mr. M'Cormick as to myself, to state, that in the extracts taken from my letter, an omission occurs which although not even savoring of a misstatement, renders my opinion of the Reaper incomplete, as expressed in the extracts from it. I stated that "I commenced reaping (according to my recollection,) with two poor nags, and that they were able to take it along with ease." I also stated that I found, after a short time, that it was necessary to attach two other nags to the end of the tongue to overcome the lateral resistance opposed by the wheat, throwing the tongue on the inner horse. I might have expressed the opinion that two horses had sufficient power to pull it. I do think so; but I think it also necessary to have one or two horses attached to the end of the tongue to steady it, and keep it from chafing the inner horse. I wish this correction made through your columns, that I may not suffer in the opinion of even those who may never know the incarnate Z. D. B., because he kept back a part, although he told the truth.

I repeat my former opinion, that I consider it almost a *perfect* machine, and doubt not any one giving it a fair trial will be pleased with it. I can hardly anticipate any improvement in it, *even in this age of progress*, (as it is called,) and if there be, I shall look to see it either a self-mover, or reaping, threshing and manufacturing into biscuits.

Respectfully, Z. Deminieu Blakistone.
St. Mary's county, Md.

GRAZING FARM.

Baltimore, June 13, 1851.

To the Editor of the American Farmer—

Sir:—I have a farm in the upper part of the State, which is adapted to the growth of grass, and I am anxious to improve and make a "grazing" farm of it, but not understanding the exact "modus operandi" required to carry on such a farm to advantage, I must beg the favor of you to solicit some of your subscribers, living in "grazing sections," to give you a paper on the subject, showing the *practical* mode of operation on such farms.

I send you a sample of rye of extraordinary growth, considering that it is the growth of poverty grass land, (which had not been broken before for thirty years) with 200 lbs. Guano, mixed with one bushel gypsum per acre. I never omitted using that quantity of plaster but once, and then the crop of wheat after it was no better than where no guano had been used, but in the next rotation for wheat, I applied the same quantity of guano—200 lbs. per acre—when the wheat and also the clover following it was very fine. There was no manure used on the land, in the interim, between the two rotations, but was cropped as hard as usual. I do not mention this fact, sir, because I have the slightest desire to be drawn into the little controversy between yourself and your much respected and intelligent correspondent, T. S. P., but only because it is to my mind a *fact* deduced from *experience*, the only source from which I ever obtained any information on farming for which I would give a 'rush.' Do not understand me, sir, as being opposed to what is termed book farming. I should like to see farmers read more than they do, but, sir, "truth is powerful," and *practice* will prevail over *theory*.

Yours, &c. Ed. Reynolds.

We hope some of our correspondents will respond to this call.

Culture of Crambe Maritonia, or Sea Kale.

To the Editor of the American Farmer—

Two weeks past, at the Horticultural exhibition, was exhibited by me 12 stalks of Sea Kale, and considered very fine, and you wished to know something of its cultivation. I shall give a brief detail, as to the mode of growing it, which I find no more trouble than any ordinary vegetable. It is a native of the sea shores of Europe, and delights in a light sandy, rich soil, but not too wet, though at times they are overflowed with the tide, in its wild state, and being a plant of such easy culture, I have often wondered they are not more in use, but have recommended it for years past, and the answer was, "I am afraid—I know nothing about it—I have got asparagus, and that is good enough." Now, I say this is better than asparagus, as to its flavor, earliness and durability. Plant roots and take care of them, and they will last for thirty years, if they are not destroyed like all the beds of asparagus I have seen here; they are cut as long as ever they are able to throw up a blade, which is destructive to any plant, divesting it of its foliage, and this is the main cause the plants die. Sea Kale can be struck from cuttings of the roots, as well as raised by seed, which will soon give a stock sufficient even for market, and when once introduced, would be called for as much as Rhubarb, though it at first had its objections as a vegetable, and now look at the consumption. All that is required for Sea Kale, is to prepare the ground as for asparagus; plant the roots out three feet apart in the rows and three feet between the rows, and not cut it till of sufficient strength, which will show the previous year stalks of sufficient strength for cutting next spring; then in the month of February collect leaves from the woods and cover the roots over 2 feet thick, and place boards, or anything, to keep them from blowing away by the winds; but previous to covering over, place square boxes or pots similar to chimney pots, two feet high, with open tops, so they can be taken off at any time, to see if the stem is blanched, and in a fit state for cutting, as it is not fit for table till completely blanched; then it is tender, and might be used. Don't cut too close to the crown of the roots, otherwise it will injure the other shoots left. The plants might be covered up in succession, from early to late in the spring. As it comes in much earlier than asparagus, it needs only a fair trial to become generally liked. Any further information will be given to those wanting plants, by applying at 279 Lexington street.

John Feast, Florist and Seedsman.

FLORAL DEPARTMENT.

Prepared by John Feast, Florist, 279 Lexington st. for the American Farmer.

All planting out of doors will now be finished for the summer, and all that will be required, is, to keep plants in a healthy growing condition, and neatly tied up to rods, or trellices, in whatever situation they may be. Cut off all dead parts, (as flowers that have passed,) so that the plants may throw out fresh wood. Head down those plants which have grown too tall and slender; it makes them more vigorous and adds much to their beauty; besides, they will make fine heads of young wood and flower far better. This causes tall unhealthy plants, with scarce any flowers, to become strong and healthy, with a profusion of bloom; they are also better specimens when kept low and bushy.

Roses should have careful trimming after flowering, to keep them in a healthy state, and cause them to flower finely during the fall months.

Layering and *budding* may be done, and cuttings taken off of such as are desired to be increased.

Carnations.—Cut off the flowering stems, and increase by layers, or cuttings.

Hyacinths, Tulips, &c.—Take up the roots and place them in some cool shady place, covered with dry sand, until the time of planting in the autumn.

Dahlias require particular attention, to avoid the attacks of the red spider; give them syringing and occasional watering with liquid manure.

Camellias must be attended to while ripening their wood, which is generally at this time. They should not suffer for water and must have frequent syringing. *Inarching* may be done; cuttings may be taken off of those plants that are wanted to be increased.

Care should be taken of green-house plants generally; both in and out of doors. Those that require repotting should be attended to, to improve their condition.

For the American Farmer.

MR. SANDS—*Dear Sir:*—Your welcome visiter never reaches me that I do not turn to its table of contents, in the hope that I may find a communication from your valuable correspondent of King and Queen county, Virginia; I mean *J. Duval*, Esquire; but I have been disappointed, for since September last, he has given nothing from his instructive pen. His two articles on Guano were truly refreshing, based as they were on common sense, reason, true philosophy, and enlightened economy. Such a light as his should not be hid under a bushel, nor would it be, did the author know how highly his communications are appreciated by his brother farmers.

AN ADMIRER.

CRANBERRIES.—*Mr. Editor:* I have a few Cranberry plants, received from New York, growing finely in my garden. Can you or any of your readers give me any information upon their habits, mode of cultivation, kind of soil suitable for them, time of ripening, gathering, &c.?

I planted them the first of the spring, or as soon as they could be taken up and sent me from N. Y.

W. H. VINES.

Raleigh, N. C., June 5, 1851.

NATIVE STRAWBERRIES.—Mr. D. W. R. Davis, of this vicinity, found a few years ago a solitary strawberry plant growing on his place, of remarkable size and vigor. He had no knowledge of its origin, but as it possessed many attractive points, he transplanted it with every care and it soon bore fruit. He was so well pleased with the quality that he bestowed great attention upon its after culture, and has now increased his stock to some sixty plants, each one so large as to require twice the space of ordinary strawberry plants. The flower stem shoots up four to six inches above the ground and bears the berries in clusters out of the reach of sand or dirt. Mr. Davis brought us yesterday a specimen of the fruit, which is unquestionably the finest as to size and flavor we have ever seen. The berries are equal in dimensions to Hovey's Seedling, and possess so little acidity as to require no sugar. They have received the name of "Davis's Seedling," and are destined to make as much noise among the cultivators of this delicious fruit as any yet brought into notice. [*Mobile Tribune.*]

BONES AND GUANO.

"*Analogy in composition between bones and guano.*

"There is a striking analogy in composition between bones and guano, which is, for other reasons interesting to the practical man.

"The following table exhibits the composition of bones compared with guano, supposing both in the dry state. Bones as they are applied to the land contain about 18 per cent. of water. Ichabo Guano from 20 to 25 per cent.

	Bones.	Guano.
Organic animal matter	33	56
Phosphates of lime and magnesia	59	26
Carbonate of lime	4	6
Salts of Soda	4	10
Salts of Potash	trace.	trace.
Silicious matter	0	2
	100	100."

Professor Johnston's Essay on the use of bones.

Assuming the above as fair analyses of *guano* and *bones*, it appears to us, that neither the one nor the other should be used on soils deficient in potash, without the application of a few bushels of ashes. If guano be the manure applied, it should be mixed with plaster, in the proportion of 25 lbs. of the latter to every hundred of the former and ploughed in, the ashes then to be broadcasted as a top-dressing—5 bushels to the acre would furnish sufficient potash for a crop. If bone-dust be used, the ashes could be mixed with the bone-dust, and harrowed in either with the seed or afterwards.—*Ed. Am. Farmer.*

DANA'S MUCK MANUAL.—We are really gratified to learn that a new edition of this great work "is in the press and will be published without delay." It "has been almost re-written, much new and valuable matter added, and brought up to the present advanced state of agricultural science." It is being published by Mr. *James B. Walker*, of Lowell, Massachusetts.

We have a copy of the *second edition*, and have ever considered it one of the most scientific works ever published,—one which no farmer should be without;—for, besides the great learning which the author displays in its pages, its *formulas* for preparing manures, is so practical—so full of common sense—as to render them available to every degree of intelligence.

USE AND BENEFITS OF LIME IN SCOTLAND.

Falkner, thus speaks upon this subject:

"There is no country in Europe where calcined lime is used to so great an extent, and in such quantities, as in the more improved and improving districts of Scotland. This may be partly owing to the total absence of chalk, which abounds in many parts of England, and which renders calcined lime less necessary there; but is principally to be attributed to the great benefit which has been derived from its use, which would hardly be credited were its effects not too correctly stated to be disputed. In bringing *new* or maiden soil into cultivation, the use of lime is indeed found to be so essential, that little good could be done without it. Its first application in particular, gives a degree of permanent fertility to soil which can be imparted by no other manure. *Maiden* soils in Lammermuir, of a tolerable quality, will, with the force of sheep's dung, produce a middling crop of oats and rye; but the richest animal dung does not enable them to bring any other grain to maturity. Peas, barley, or wheat, will set out with every appearance of success, but when the peas are in bloom, and the other grains putting forth the ear, they proceed no further, and dwindle away in fruitless abortion; while the same soils, when sufficiently limed, will, in good seasons, bring every species of grain to maturity.

This fact proves that oats and rye require less calcareous matter than what is necessary for other grains; that lime acts as an alterative, as well as an active medicine; and that the defects in the constitution of the soil are cured, even after the stimulant and fertilizing effects of the lime have long ceased to operate. Lime is also peculiarly beneficial in improving moorish soils, for making them produce good herbage where nothing but heath and unpalatable grasses grew formerly, of which instances, too numerous to be repeated, must be in the recollection of every experienced farmer. The expense of this article, and the distance to which it is carried, in some parts of Scotland, is stated to be enormous: in Aberdeenshire, for instance; very little of it is

produced in that country; it is carried inland to the distance of more than 30 miles, after being imported from Sunderland: yet lime is there considered to be so absolutely necessary to the land as to be considered the foundation of all substantial improvement."

IMPORTATION OF CATTLE.—By the German Barque Regina, which arrived at this port a few days ago, four cows were received, which give promise of great improvement to the dairy stock of the country. They are from the grand duchy of Holstein-Oldenburg, and that part of it known as Oldenburg proper; a level and fertile plain, watered by the Weser and the Jahde, whose rich meadows are grazed by a breed of cattle, generelly designated here as the Holstein breed, and which, for the dairy, are very rarely surpassed. The remarkable milking properties of the few which are found in the neighborhood, induced the enterprise of importing them, and the accidental presence in Germany of a gentleman of Baltimore offered the opportunity of having the order executed with sole reference to the excellence of the animals imported under it. They arrived in good health, but somewhat wasted in flesh by the fatigue and hardships of a long voyage, and exhibit the points of admirable dairy cattle. Two of them are the property of Zenos Barnum, Esq. of Baltimore, and the others of William B. Dobbin, Esq, of Howard County. They will all, doubtless, be exhibited at our annual Fair next fall.

PLANK ROADS.—We learn from the Valley Farmer, that Mr. *J. E. Ware*, of St. Louis, Missouri, has effected an improvement in the manner of constructing plank roads, for which he obtained a patent, by which a saving of 20 per cent. in cost is saved, while the work is more durable and requires much less time in construction than the ordinary method.

It strikes us, that plank roads, well made, would operate as a great saving to farmers and planters, who now have to transport their produce over the ordinary country roads, where, in wet weather, their horses, mules, and oxen, sink to their knees, and their carts, and wagons, up to their hubs. Such roads are killing to men and beasts, and should be reformed.

CORN AND TOBACCO CROPS.—The unusually cool spring and summer, and the long continued drought, has materially affected these crops—the Worm has also been very destructive to the Corn in some sections—but this crop may and probably will rally by the more seasonable weather we have had since the 20th ult.—but the accounts of the Tobacco crop of this State, Virginia and Ohio, are of the most decidedly unfavorable character, and it is believed that the crop must be almost an entire failure in some districts. In Ky. it is said to be very promising.

The heavy yield of Wheat has depressed the price of this staple—but the demand which has sprung up from Europe, by the last two or three arrivals, may have a tendency to cause it to rally again. The secret advices, it is said, represent the demand for our produce as much greater than the published accounts.

Sundry communications have been received too late to notice particularly.

Agents.—Mr. *Wm. Stewart*, bookseller, Hagerstown, Md. will continue to act as agent for the Farmer.—*Wm. Dodge*, Esq. is also requested to act for us in Washington Co. Md.

F. C. Stainback, at John Rowlett's, City wharf, Petersburg, Va. and R. Irby, Nottoway Co. Va. will also act as agents.

Postage on the Farmer—In the County of Baltimore, free—within 50 miles of this city, 5 cts. *per year*—over 50 and under 300 miles, 10 cts. *per year*—over 300 and under 1000 miles, 15 cts.—over 1000 and less than 2000, 20 cts —over 2000 and less than 4000, 25 cts.

REVIEW OF THE TOBACCO & GRAIN MARKETS.

Reported for the American Farmer by J. W. & E. Reynolds.

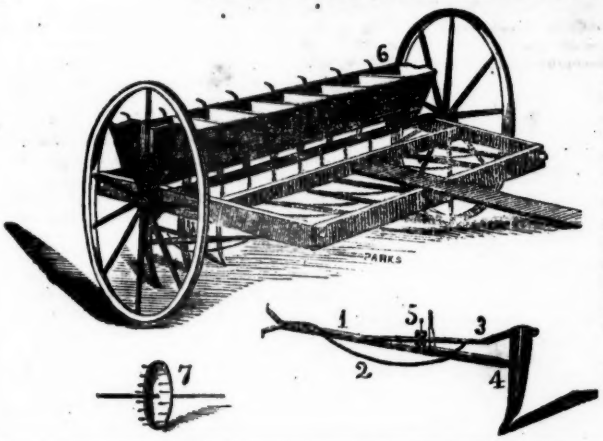
Tobacco—The feeling is somewhat better for Tobacco during the past month—an improvement in some descriptions of Maryland has taken place, and transactions have recently been fair. We quote as follows: $4.50 a 5 for inferior Maryland; $5 a 6 for good common, Middling $6.50 a 7.50; Good $7.50 a 9; and very fine $12. Ohio inferior to good common $5 a 6.50; good red and spangled $5 a 7.50; good fine red and spangled $7 50 a $13; good and fine yellow $10 a 15; fine red segar wrappers $12 a 15.

Cattle, beef, $2¾ a 3¾ on the hoof, equal to $5½ a 7½ net, and averaging $3¼ gross—Hogs, $6 a 6.50—Flour, How. st. $4 a 4⅛; City Mills, $4¼; family flour, $5; Susq. $4⅛ a 4¼—Rye flour, $3½—Corn Meal for bbls. $3—Peas, $1.05 per bush.—Beans, $1.87—Hay, baled Maine, 15 a 16; common, 13 a 14; baled Straw, $11½ a 12—country hay, 11 a 12 per ton—Sugar, Cuba, $4.50 a 6; N. O. $5 a 6; Porto Rico, $4.25 a 6.50—Whiskey, 24½ a 25c for bbls., scarce.

Wool—by Jas. Baynes—Wool has been coming more freely, and prices fully maintained—we quote full blood 37½ a 40; ½ to ¾, 36 a 37½; ¼ to com. 31 a 34½; all unwashed ⅓ off.

Guano—Since our last, advices to be relied on have induced the expectation that the supply will be ample for the fall use—a number of vessels are reported, which will, with but little doubt, arrive here in time—the price, however, we think will not materially vary from present prices, which we quote as follows, viz: Peruvian, $50 per long ton, for 50 tons or more—10 to 20 tons, $46 per short ton—single ton $47—less than a ton $48. The following vessels have arrived from the Peruvian coast since 1st May, with guano, viz: the Juniata, 1078 tons; Emerald 605; Chenango 448; S. E. Howell 1000; Herman 550; Richmond 600; Mersey 450; Mount Vernon 600—making 5331 tons arrived—the Palestine, put into Pernambuco, has 600 tons—To arrive by the 15th Sept. the Morgan Dix 280 tons; E. Barrs 245; Amesbury 168; Caroline 395; Dudley 249; Norman 340; O. Mitchell 345; S. America 605; Plymouth 425; Finland 549—making 3601 tons yet to arrive.

WHEAT DRILL, (WILLOUGHBY'S PATENT.)



TIME IS MONEY!

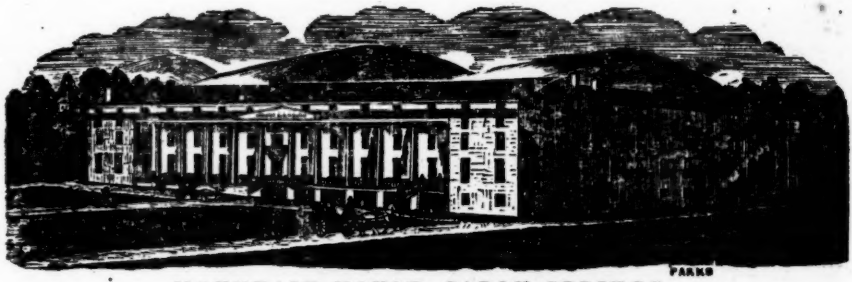
This Drill is superior to all others for the following reasons, viz: The construction is the most simple; the tines or shovels are self-adjusting, when thrown back by any fixed object; the feeding part is always exposed to view, so that its works can be seen at all times; can be altered to sow different quantities, and will perform well, with less loss of time, upon rough and stony ground, than any other Drill.

Call at No. 95 Light street wharf and examine the above Drill, where they are for sale.

JAMES C. ATLEE.

jy. 1-1t

CAPON SPRINGS.



MOUNTAIN HOUSE, CAPON SPRINGS.

THE proprietors of the "Mountain House" at this popular "Watering Place," have now completed their improvements on an extended scale: the furniture is entirely new, and the rooms spacious and well ventilated. The Bath establishment recently erected, is the property of the State of Virginia.—It is about 300 feet long, has all the modern improvements, with cold, warm, shower and plunge baths; a dressing room is attached to each bath, and it is altogether a magnificent building of its class, not equalled in this country—nor is it surpassed in Europe.

The recent costly and extensive improvements, the well known medicinal properties of its waters, and the delightful atmosphere of its mountains, combine to render Capon Springs one of the most pleasant, as well as the most healthful, summer retreats in the Union. The citizen of the South will here find, what has been long wanted, a *Southern* watering place of the *first class*, convenient of access, where he can spend his summer months, free from the *unpleasant annoyances so frequently experienced of late years*, at similar places in the North.

The appointments of the house will be under the superintendance of competent persons in all the departments.

There is an abundant supply of Ice secured for the season. A superior Band of Music is engaged, and will be in attendance. Billiard and Bowling Saloons are now completed; also Shooting Gallery and Archery.

ROUTE—Visiters leaving in the morning train of Baltimore and Ohio R. R. Cars, dine at Winchester and arrive at the Springs for tea.

☞ An arrangement has been effected with the different lines, by which the citizens of Baltimore and Southern Virginia, can procure "*through tickets*" to Capon Springs, from Baltimore, Richmond, Norfolk, Fredericksburg, and the District cities, at prices much reduced on former rates. The exact prices from each point will be made known through the newspapers in due season.

The house will open on the 15th of June next.

THE PROPRIETORS.

Capon Springs, Hampshire Co. Virginia. may1-3t

R. B. PORTER. J. F. TOWNER.

PORTER & TOWNER,
WOOL DEALERS,
AND
GENERAL COMMISSION MERCHANTS.

AGENTS for the sale of Rees & Hoyt's Patent Premium Riveted Stretched Leather Bands, Vulcanised Rubber Bands, Hose, Steam Pipe Packing, &c., Smiths', Braziers' and Founders' Bellows; Tinners' Tools and Machines; Wool, Warps, Bands, Cards, Soap, Oil, Leather, Cloth, Shuttles, Reeds, &c. Machinery of all kinds bought or sold on commission.

No. 342 Baltimore street, Baltimore.

Porter & Towner will always give the full market price for all description of WOOL, and solicit growers to give them a call before selling their Wool. je. 1-3t

BONE DUST.

THE subscriber will furnish ground Bones, warranted free from every mixture, *or the entire quantity forfeited*, at 55 cents per bushel, until the 1st of July next.—Also a second quality article, composed in part of Bones, and in part of Flesh of Animals, being a quick and powerful fertilizer, at 35 cts. per bushel.—Col. W. W. W. Bowie, the well known "Patuxent Planter," who receives his supply of bones from my Factory, says that the "bone dust at 55 cts. per bushel, was the best I ever saw."

Orders may be left at the "American Farmer" office, directed to me, or at the Factory below the Race Course, Canton, near Baltimore, will meet prompt attention.

None of my manufactured Bone Dust is sold except at my Factory. JOSHUA HORNER.

My second quality is a new article of manure; I commenced making it from reading that portion of Dr. Higgins' report, in which he advises farmers not to buy made up or compound manures, but to make their own, viz: to procure the offal of the slaughter houses, &c. and boil the same and mix it with their barn-yard manure—The article I offer to the public is made from the flesh of animals boiled, mixed with plaster and charcoal, to preserve the ammonia—lime, soda, and ashes, are also used in small proportions, in the process of manufacture—it is put up in pie, under cover, for 6 to 9 months, the whole mass is then mixed with an equal quantity of ground bones—There is no grand secret in this preparation—it is a substantial, quick and powerful manure, combining the durability of bones with the immediate action of guano, and hardly second to the latter, for insuring an immediate return for the investment. J. H.

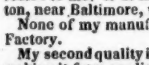
I furnish to my customers, when bags are not sent, 2 bushel bags, at 6 cents each. may1-3t*

BOOKBINDING.

WILLIAM C. LYCETT, No. 125 BALTIMORE-ST.,

Opposite the American Farmer office,

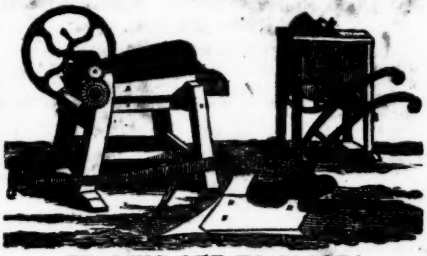
WILL execute all orders in the above business with promptness, in a neat and substantial manner, and in every variety of style, in full or half bound Tur. Morocco, Russia, Calf, Sheep or Muslin at the lowest possible rates, such as Bibles, Magazines, Music and old Books carefully mended or re-bound. Feb. 1-eoly



C. H. DRURY, *Hollingsworth street corner of Pratt—Head of the Basin*—having completed his establishment with Foundry connected, for the making his own Castings, is prepared to furnish all varieties of *AGRICULTURAL IMPLEMENTS* and *CASTINGS*, made to pattern of the best material.

The following is a list of PLOWS kept constantly on hand: Davis, of the different numbers, for wrought and cast shears, S. & M., Chenoweth, Wiley, 2 and 3 furrow, No. 0, Hill side, No. 1 and 3 Connecticut—Bench Improved or Posey Plow, with common Davis cast shear—Self-sharpener or wrought shear—Corn Cultivators, plain and expanding—Tobacco do.—Wheat Fans—Corn shellers with double hopper—Old Vertical and Virginia sheller—Harrows—superior Pennsylvania made Grain Cradles—Revolving Horse Rakes—Cylindrical straw Cutters, &c. &c. Horse Power *GRIST MILLS*, a very useful and saving article, and coming into general use. *HORSE POWER AND THRESHING MACHINES*, of these I need not say any thing, as wherever they have been in use any time, they are preferred to all others.

C. H. D. will this year make a smaller size Power & Thresher, (price of Power, $100, Thresher, $50, Band, $10, or when taken together, complete, $150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. jel



SELLING OFF TO CLOSE!
A STOCK OF
AGRICULTURAL IMPLEMENTS
Amounting to $10,000,
TO BE SOLD AT GREAT SACRIFICE.

THE undersigned having determined to change their entire business, would call the attention of Farmers, Gardeners and Dealers, to their extensive stock of Agricultural Implements, which they will dispose of on the most reasonable terms for cash, with a desire of a speedy close.

The Implements consist, in part, of Horse Powers and Thrashers; Wheat Fans, a superior article—took the First Premium at the late annual Fair; Straw Cutters, various kinds and sizes, consisting of Cylindrical Box, which is too well known for us to speak further—the Raw Hide Repeating, or the Boston Box, suitable for cutting straw or hay; Corn Shellers of all kinds; Ploughs of every kind, suited for the different varieties of soil. Our stock of the latter is very large, numbering upwards of 600, which we will close out at much reduced rates. Also, Churns of an endless variety, with Shovels Forks, Cradles, Briar Hooks, Apple Pearers, Sausage Cutters and Fillers, together with a general assortment of articles suited for the farmer. Home Seeds from the Shakers' Gardens, N. York, celebrated for their freshness, &c.

We will also dispose of an elegant STEAM ENGINE, Turning Lathes, Circular Saws, Drilling Machines—together with an elegant Brick Shop, making everything complete for manufacturing purposes. The agricultural community will please give us a call before purchasing elsewhere.

No. 97 NORTH PACA ST., near Franklin.

For the accommodation of those having water communication with the city, we will have an office on BALDERSTON STREET, near Light, where we will be happy to rece.ve all orders, and promise to give punctual attention.

mar 1 HAMBLETON & DIDIER.

Caution against Piracies on PAGE'S CIRCULAR SAW MILL.

HAVING been informed that certain persons, without any authority from me, have been manufacturing my *Improved Portable Patent Circular Saw Mills*, and fraudulently selling the same to divers persons, *for use in the States of North Carolina, South Carolina, Georgia, Alabama, Louisiana, Florida, Texas, Mississippi, Kentucky, Ohio* and *Pennsylvania*, this is to caution all persons residents of said States, from purchasing said Mills from any other person than myself for use in either of the before mentioned States, as I shall prosecute all such offenders. My agents will forthwith report the names and residences of all such offenders to me, as I may take measures to prosecute them.

GEORGE PAGE, Inventor,
Patentee and Manufacturer.
Baltimore, Md., April 1, 1851. Ap. 1

AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.——*GEORGE PAGE*, Machinist & Manufacturer, Baltimore st. West of Schroeder st. Baltimore, is now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in his line. He can furnish Portable Saw Mills to go by steam, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from $85 to $300, and each simple, strong and powerful. His *Horse Power & Thrashing Machine*, he is prepared to supply at the low price of $125 complete; the Thrashing Machines without the horse power, according to size, at $30, 40, 65 and $75; Improved Seed and Corn Planter Portable Tobacco Press; Portable Grist Mills complete, $165

GUANO! GUANO!!

400 TONS PERUVIAN GUANO, late importation. Also, Patagonia Guano and Bone Dust—Building and Agricultural Lime. For sale in quantities to suit purchasers by WILLIAM ROBINSON,
Mar. 1. No. 4 Hollingsworth st., near Pratt st. Wharf.

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[SUPPLEMENT TO THE AMERICAN FARMER.]

LIST OF PREMIUMS

AND

RULES AND REGULATIONS

FOR THE

FOURTH CATTLE SHOW

AND

AGRICULTURAL AND HORTICULTURAL EXHIBITION,

TO BE HELD BY THE

MARYLAND STATE AGRICULTURAL SOCIETY,

In the City of Baltimore, on TUESDAY, WEDNESDAY, THURSDAY and FRIDAY, the 23d, 24th, 25th, and 26th of September, 1851.

BALTIMORE:
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1851.

TO THE FARMERS OF MARYLAND AND THE NEIGHBORING STATES.

THE Maryland State Agricultural Society now gives notice of its FOURTH ANNUAL EXHIBITION. It is truly gratifying to it to be able to make known that the Society is no longer obliged to rely exclusively upon its own resources to sustain it in the work it has to accomplish, but having given earnest of its usefulness and value, the citizens of Baltimore have generously come forward, and by a liberal subscription have placed at its disposal an ample amount of ground, and a large sum of money to adapt it to its use. The proceedings by which this result has been accomplished will be found appended to this Premium List, and the Society commend them to the notice of the Farmers of the State, to show that their exertions to improve and elevate their calling, have awakened the sympathies, and commanded the approbation, of the commercial class, which has been heretofore charged with being too insensible to all interests but its own. We feel now, that in our Annual Festival, we shall be, in a manner, the guests of the City of Baltimore, invited with a cordiality which bespeaks a hearty welcome. Shall we not then make an increased effort to render the occasion more than ever worthy of ourselves and of the growing favor which our pursuit is commanding? The Society, animated by a zeal which the prospect of certain success stimulates to the utmost, and putting itself forth as your representative, aims now at making an Exhibition of which the State may feel proud. But to do this it depends upon you, and requires something more than the mere approval of your judgment, without the participation of your active and spirited co-operation. It expects of you to speak of the subject constantly and approvingly among your neighbours, so as to encourage them to unite by the same course of action, in furthering the enterprise; it expects you to send forward, at whatever temporary inconvenience and trouble it may cost you, your stock, the products of your labour, the articles of domestic comfort which your family excel in producing; it expects you to be present at the Exhibition with your wife and children, making the Show week a period of blended recreation and instruction; and it expects you in every way in which precept and example may promote the enterprise, to give it the benefit of both. To do this, you have all the incentives which stimulate the man of commerce to accumulate wealth by industry and enterprise, or the professional man to acquire knowledge by toil and study. Your calling combines all that is good in both; the first in the world if you cultivate it with liberal enterprise and intelligence,—the lowest and most servile, if you drudge in it with careless apathy and mere toilsome labour. The Society desires it to be understood that this appeal is not limited by sectional lines, but is addressed to the Farmers of the whole country. Although distinguished by the name of a State, of which it is proud, it claims to be aided in its councils by distinguished men from other States, and in the generous rivalry of its Exhibitions for the palm of excellence, it courts competition from every quarter. This invitation so freely given it is hoped none will refuse.

CHARLES B. CALVERT, of Prince George's County, *President.*

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STANDING COMMITTEES.

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On Insects injurious to Husbandry.—Dr. J. E. Muse, of Dorchester; Wm. H. Farquhar, of Montgomery; Dr. J. Higgins, of Anne Arundel; Richard Earle, of Queen Anne's; Thos. S. Pleasants, of Virginia.

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On Agricultural Implements.—M. T. Goldsborough, of Talbot; E. J. Hall, of Montgonery; J. Jones, of Delaware; L. W. Washington, of Virginia; J. S. Stevenson, of Worcester County.

Committee on Fruits.—Dr. John H. Bayne, of P. George's; Judge Brewer, of Annapolis; L. N. Rogers, of Baltimore; Joshua Pearce, of Washington, D. Columbia; John M. Wyse, of Baltimore County.

Committee on Flowers.—Edw. Kurtz, Dr. Gideon B. Smith, T. Edmondson, Johns Hopkins.

Committee on the Library.—George W. Dobbin, Samuel Sands, and A. P. Giles.

Committee on Finance.—J. Glenn, of Baltimore; Martin Goldsborough, of Talbot; Wm. Dodge, of Washington County; Geo. W. Riggs, of Washington, D. C; James H. Luckett, of Baltimore.

On Farm Buildings.—Col. Capron, of P. George's; General T. Tilghman, of Talbot; D. M. Perine, of Baltimore; J. S. Sellman, of Anne Arundel; Col. Jas. T. Blackiston, of St. Mary's.

Committee on Cattle.—Dr. J. W. Thompson, of Delaware; A. Clement, of Pennsylvania; Willoughby Newton, of Virginia; A. B. Davis, of Montgomery County, Md; T. S. Lee, of Frederick County, Maryland.

Committee on Horses.—H. G. S. Key, of St. Mary's; W. W. W. Bowie, of Prince George's; Col. F. Thompson, of Charles County; J. R. Emory, of Queen Ann's County; R. Gilmor, of Baltimore County.

On Swine.—John Gibson, James G. Cox, William Jessup, J Wilkinson, of Penn.; R. C. Brooke, of Prince George's County, Md.

Committee on Agricultural Education.—Dr. H. Humphreys, of Annapolis; Edward P. Roberts, of Baltimore; James T. Earle, of Queen Ann's; Benjamin Hallowell, of Alexandria, Va; J. Wilkinson, of Pennsylvania.

Committee on Agricultural Productions.—James Gowen, of Pennsylvania; Wm. A. Spencer, of Queen Ann's County, Md.; Martin Goldsborough, of Talbot; D. W. Naill, of Frederick County; James Somerville, of Prince George's.

Committee on Discretionary Premiums.—Wm. Carmichael, J. C. Henry, Allen Dodge, Dr. Wharton, Robert Dick.

Committee on Transportation.—George W. Dobbin, of Howard District; George Patterson, of Carroll; J. C. Walsh, of Harford; Col. H. Capron, of Prince George's; and James Goldsborough, of Talbot.

Committee on Review.—Messrs. Roberts, Dobbin, Abell, Jones, Richardson, and Barnes.

☞ It is particularly requested that the gentlemen composing the above committees will elicit as much information as possible on the various subjects submitted to them, and report to the Secretary on or before the 1st of September, that their reports may be laid before the Society, on the 22d Sept.

Head Quarters at the Society's Rooms, in the City, and during the exhibition, at the office on the ground.

COMMITTEE ON RECEPTION OF STRANGERS.—Sam'l Sands, J. C. Walsh, and Dr. John O. Wharton.

ORDER OF THE EXHIBITION.

ON TUESDAY MORNING, at 10 o'clock, the Judges will enter upon the performance of their duty of inspecting and awarding Premiums, except in the cases hereinafter mentioned. On that day none but members of the Society and the Judges will be admitted to the ground.

ON WEDNESDAY, at 12 o'clock, the Horses of all classes contending for premiums, will be brought upon the Horse Track for inspection and judgment.

ON THURSDAY, at 10 o'clock, trials in the draught of Horses, Mules and Oxen will be made on the Horse Track, for which appropriate means will be provided.

At 12 o'clock on the same day, the PLOWING MATCH will take place.

ON FRIDAY MORNING, at 9 o'clock, the articles contained in the classes "Dairy and Honey," "Fruits," "Domestic Wines and Cordials," "Household Manufactures" and "Bacon Hams," will be inspected and judged.

At 12 o'clock, the ANNUAL ADDRESS will be delivered, and immediately after the address, the reports of the Judges will be made and the premiums awarded and distributed.

On the evenings of MONDAY, TUESDAY, and WEDNESDAY, at half past seven o'clock, the Executive Committee, (composed of all the Officers of the Society,) will meet in the smaller of the Society's Rooms, for the transaction of business. As the great mass of the business details of the Society will be transacted by this Committee, it is requested that the members of it will be punctual in their attendance.

On the evenings of TUESDAY and WEDNESDAY, the members of this Society, Farmers generally, and all persons interested in the subject of Agriculture, are invited to meet in the Society's large room for conversation and discussion upon Agricultural subjects. The chair will be taken at half past seven o'clock. The subject suggested for the conversation on Tuesday evening, is "Sheephusbandry in the Middle and Southern States; the varieties best adapted to these latitudes, their breeding and management, and the necessity of Legislative protection to it as a most valuable branch of rural economy." That for Wednesday evening, is, "Concentrated manures and their value in a system designed to effect permanent improvement; the necessity of an inspection based upon exact chemical analysis." These conversations will be familiar, and being designed to elicit practical information in the plainest form, it is expected that they will form among the most interesting of the week's proceedings.

On THURSDAY EVENING, the Society will meet in its large room to elect officers for the ensuing year, and the transaction of such other business as may come before it.

REGULATIONS OF THE FAIR.

All members of the Society, and all who shall become members previous to or after the Fair, will be furnished with badges, which will admit the person and the ladies of his family to the Exhibition at all times during the continuance of the Fair. Tickets to admit a single person, 25 cents.

All Exhibitors at the Fair must become members of the Society, and have their animals or articles entered at the business office, before taking them into the enclosure.

All those who intend to compete for the premiums of the Fair, should have their animals and articles on the ground, *without fail*, on Monday, the 22d of September, so that they may be arranged and in readiness for examination by the Judges on Tuesday morning.

This regulation must be strictly adhered to, otherwise the Society will not be responsible for the omission of any animal or article on the Lists.

No animals or articles entered for exhibition, can be taken away before the close of the Fair, except by permission of the Executive Committee—and no premium will be paid on animals or articles removed in violation of this rule.

Animals and articles entered for Exhibition will have cards attached with the No. as entered at the business office, and exhibitors should in all cases obtain their cards previous to placing their stock or articles on the show grounds.

All persons who intend to exhibit Horses, Cattle, Sheep or Swine, or who intend to offer Stock for sale, should notify the Secretary, SAMUEL SANDS, of such intention, on or before the 1st day of September, and leave with him a list and full description of such Stock, in order that proper arrangements may be made for their accommodation.

Applicants for premiums are particularly requested to pay attention to the directions attached to the list of premiums for fat cattle, fat sheep, butter and cheese, field crops, &c., and the statements required from Exhibitors of those articles must be lodged with the Secretary, SAMUEL SANDS, Baltimore, before the 1st of September.

☞ MEMBERS OF THE SOCIETY, AND THE VIEWING COMMITTEES OR JUDGES ALONE WILL BE ADMITTED THE FIRST DAY OF THE EXHIBITION.

INSTRUCTIONS TO MARSHALS AND JUDGES.

The Marshal of each department will take special charge of the matters within his department, and will attend to their accommodation and arrangement. At the appointed time he will get the Judges of his department together, and point out all subjects for their decision, and when their duty is discharged, he will get their report and return it to the Recording Secretary.

The Judges on animals will have regard to the symmetry, early maturity, size and general qualities characteristic of the breeds which they judge.—They will make due allowance for age, feeding and other circumstancee on the character and condition of the animals. They will not give encouragement for overfed animals. They will not award premiums for Bulls, Cows or Heifers, which shall appear to have been fattened for the butcher; the object being to have superior animals of this description for breeding.

No person whatever will be allowed to interfere with the Judges, during their adjudications.

The Judges on stock, if not satisfied as to the regularity of the entries in their respective classes, will apply to the Secretary for information; and should there be any doubt, after examination, of their coming within the regulations, or if any animal is of such a character as not to be entitled to exhibition in competition, they will report the facts to the Executive Committee, that such course may be adopted as the case may require.

The Judges will be expected *in all cases* in making their reports, to *give the reasons of their decision* (especially in the case of animals) embracing the valuable and desirable qualities of the animals or articles, to which premiums are awarded.

When any thing is exhibited to the Judges, which they shall deem meritorious, but beyond their power to award a premium to, they will furnish a note of the same to the Committee on Discretionary Premiums, for their consideration and action.

No animal or article can take more than one premium.

No animal or article which has previously taken the Highest Premium of the Society, can again become a competitor for a premium of the same grade.

All productions, placed in competition for premiums, must be the growth of the competitors.

When there is but one exhibitor, although he may show several animals in a class or subdivision of a class, only one premium will be awarded—that to be first or otherwise, as the merit of the animal or article may be adjudged. And a premium *will not be awarded* when the animal or article is not worthy, though there be no competition.

LIST OF PREMIUMS AND JUDGES.

In presenting the accompanying List of Premiums, which have been greatly increased, and are now equal in size to those offered by any Society in the country, it is proper to remark, that from a desire to establish the Society on the most liberal basis, we have determined that no State lines shall circumscribe the field of competition, but that the lists shall be open to the whole United States; and in furtherance of this object we most particularly invite those from our neighboring States to compete for our prizes.

There will be a Sale, under the direction of the Society, of such improved Live Stock and Implements, as may be offered for that purpose, and those persons having such to dispose of, will find it to their interest to give the Secretary a list thereof, with a full description at the earliest possible day, in order that greater publicity may be given to it, as it is expected and known that many will attend with a view of purchasing.

Great care has been taken in the selection of Judges, and it is believed that no names more worthy of the confidence of the community could be selected, and it is therefore confidently hoped, that they will accept by reporting themselves to the Secretary by 12 o'clock, on the 22d of September, as all vacancies must be filled on the evening of that day.

The Judges are requested to hand in their reports and awards on the afternoon of the 24th, in order that the Premiums may be declared and distributed on the morning of the 25th.

PREMIUM ANIMALS.

Judges.—J. W. Thompson, J. W. Ware, Willoughby Newton.
Marshal—Chas. G. Hanson.

For the best Bull of any breed, which has previously taken a first premium of the Society, $20.

For the best Cow of any breed, which has previously taken a first premium of the Society, $20.

☞ For these premiums it is expected that different breeds of animals will be brought into competition with each other. The awards will be made in favor of the animals which approach the *nearest to the standard of perfection, for their various breeds and classes.*

CATTLE.

MARSHAL—JAMES N. GOLDSBOROUGH.

Judges of neat Cattle over 3 years old.—Dr. J. W. Thompson; Geo. E. Brooke; H. Capron; Wm. H. Jones, and J. Wilkinson.

MARSHAL—WM. B. DOBBIN.

Neat Cattle between 2 and 3 years.—Col. J. W. Ware; Col. E. Lloyd; Dennis Kelly; P. C. Holcomb, and P. H. Small.

MARSHAL—JAMES MULLIKIN.

Neat Cattle under 2 years.—Willoughby Newton; Philip Reybold; George Blight; Daniel Lloyd, and Benedict J. Heard.

SHORT HORNS.

For best Bull 3 years old and upwards,		$20
2d best	do	10
3d best	do	5
Best Bull, between 2 & 3 years		10
2d best	do	6
3d best	do	4
Best Bull between 1 and 2 years		10
2d best	do	5
Best Bull Calf		5
2d best Bull Calf		4
Best Cow, 3 years old and upwards,		20
2d best	do	10
3d best		5
Best Heifer between 2 and 3 years old		10
2d best	do	6
3d best	do	4
Best Heifer between 1 and 2 years old		10
2d best	do	5
Best Heifer Calf		5
2d best Heifer Calf		4

HEREFORDS.

For best Bull 3 years old and upwards,		20
2d best	do	10
3d best	do	5
Best Bull between 2 and 3 yrs.		10
2d best	do	6
3d best	do	4
Best Bull between 1 and 2 yrs.		10
2d best	do	5
Best Bull Calf		5
2d best Bull Calf,		4
Best Cow, 3 years old and upwards,		20
2d best	do	10
3d best	do	5
Best Heifer, between 2 and 3 years old		10
2d best	do	6
3d best	do	4
Best Heifer between 1 and 2 years		10
2d best	do	5
Best Heifer Calf		5
2d best Heifer Calf		4

AYRSHIRE.

For best Bull 3 years old and upwards		20
2d best	do	10
3d best	do	5
Best Bull between 2 and 3 yrs.		10
2d best	do	6
3d best	do	4
Best Bull between 1 and 2 yrs.		10
2d best	do	5
Best Bull Calf,		5
2d best Bull Calf		4
Best Cow 2 years and upwards		20
2d best	do	10
3d best	do	5
Best Heifer between 2 and 3 years,		10
2d best	do	5
3d best	do	4

Best Heifer between 1 and 2 years, 10
2d best do 5
Best Heifer Calf 5
2d best Heifer Calf 4

HOLSTEIN.

For best Bull, 3 years and upwards 20
2d best do 10
3d best do 5
Best Bull between 2 and 3 yrs. 10
2d best do 6
3d best do 4
Best Bull between 1 and 2 yrs, 10
2d best do 5
Best Bull Calf, 5
2d best Bull Calf 4
Best Cow 3 years and upwards 20
2d best do 10
3d best do 5
Best Heifer between 2 and 3 years 10
2d best do 6
3d best do 4
Best Heifer between 1 and 2 years, 10
2d best do 5
Best Heifer Calf 5
2d best Heifer Calf 4

NATIVES OR GRADES.

For best Bull 3 years and upwards, $20
2d best do 10
3d best do 5
Best Bull between 2 and 3 yrs. 10
2d best do 6
3d best do 4
Best Bull between 1 and 2 yrs. 10
2d best do 5
3d best do 4
Best Bull Calf 5
2d best Bull Calf 4
Best Cow 3 years and upwards 20
2d best do 10
3d best do 5
Best Heifer between 2 and 3 years 10
2d best do 5
3d best do 4
Best Heifer between 1 and 2 10
2d best do do 5
Best Heifer Calf 5
2d best Heifer Calf 4

DEVONS.

For best Bull 3 yrsand upwards 20
2d best do 10
3d best do 5
Best Bull between 2 and 3 yrs. 10
2d best do 6
3d best do 4
Best Bull between 1 and 2 yrs. 10
2d best do 5
Best Bull Calf 5
2d best Bull Calf 4
Best Cow 3 years and upwards 20
2d best do 10
3d best do 5
Best Heifer between 2 and 3 years 10
2d best do 6
3d best do 4
Best Heifer between 1 and 2 10
2d best do do 5
Best Heifer Calf 5
2d best Heifer Calf 4

ALDERNEY.

For best Bull 3 years and upwards 20
2d best do 10
3d best do 5
Best Bull between 2 and 3 yrs. 10
2d best do 5
3d best do 4
Best Bull between 1 and 2 yrs. 10
2d best do 5
Best Bull Calf 5
2d best Bull Calf 4
Best Cow 3 years and upwards 20
2d best do 10
3d best do 5
Best Heifer between 2 and 3 years 10
2d best do 6
3d best do 4
Best Heifer between 1 and 2 years 10
2d best do 5
Best Heifer Calf 5
2d best Heifer Calf 4

WORKING OXEN.

Judges.—Wm. T. Goldsborough, William Jessop, A. Clement, Mr. Thurlock, of Delaware; L. Bayley, of Virginia.

For best yoke of Oxen over 4 years old 20
2d best do 10
3d best do 6
For best yoke of Steers under 4 years old 20
2d best do 10
3d best do 6
For best yoke of Cows 20
2d best do 10
3d best do 6

A cart will be provided to test the working qualities of the animals.

FAT CATTLE AND SHEEP.

MARSHAL—STERLING THOMAS, JR.

Judges.—Thos. A. Emory; Charles H. Carter; Samuel T. Earl; J. M. Turner, and Sterling Thomas.

For best pair Fat Steers, 20
best fat Cow 10
best fat Heifer 6

Applicants for premiums for fat cattle must furnish statements of the manner of feeding.

The Judges on Fat Cattle, will give particular attention to the animals submitted to them for examination. It is believed that all other things being equal, those are the best cattle that have the greatest weight in the smallest superficies. The cattle exhibited in this class will all be weighed, and the Judges will take measures to give the superficies of each, and publish the result with their reports.

For best slaughtered mutton, (long wool,) 10
For best slaughtered mutton, (middle wool,) 10
best slaughtered mutton, (fine wool *ntv'e or mix'd*) 10
best lot of live mutton, not less than 6 in number 10

SHEEP.

MARSHAL—EDW. LLOYD, JR.

Judges.—Wm. D. Bowie; A. R. Allen, of New York; James R. Gray, of Va.; Dr. Walter Turpin, of Queen Anne's Co.; Bryan Jackson, of Delaware.

Fine Wool—For best Buck $10
2d best do 6
3d best do 3
For best pen of Ewes, not less than three, 10
2d best do 6
3d best do 3
Best pen Lambs, not less than 4, 7
Long Wool—For best Buck 10
2d best do 6
3d best do 3
For best pen of Ewes, not less than three 10
2d best do 6
3d best do 3
Best pen of Lambs not less than four 7
Middle Wool—For best Buck, 10
2d best do 6
3d best do 3
Best pen of Ewes, not less than three 10
2d best do 6
3d best do 3
Best pen of Lambs not less than four 7
Native or Mixed blood—
For best Buck 10
2d best Buck 6
3d best Buck 3
Best pen of Ewes, not less than three 10
2d best do 6
3d best do 3
Best pen of Lambs, not less than four 7
Imported Sheep—For best imported Buck and Ewe, of any description each 15
2d best Buck and Ewe, each 5
3d best do do 3

SWINE.

Large Breed.

MARSHAL—SAM'L DICKINSON.

Judges—Eph. G. Cox; Edward T. Paca; Dr. C. M. Jones; Edward Gorsuch; Jas. C. Atlee.

For best Boar, over 2 years old 10
2d best do 6
Best Boar 1 year old 10
2d best do 6
Best Boar 6 months and under 1 year 10
2d best do 6
Best Breeding Sow over 2 yrs. 10
2d best do 6

Best breeding Sow one year 10
2d best do 6
Best Sow 6 months and under one year 10
2d best do 6
Best lot of Pigs, not less than 5, under 10 months 10
2d best 6
Includes Chester, Berkshire, Russia, Mackay, Leicester and their grades.

Small Breed.

For best Boar over 2 years 10
2d best do 6
For best Boar one year old 10
2d best do 6
Best Boar six months old 10
2d best do 6
Best breeding sow over 2 years 10
2d best do 6
Best breeding Sow 1 year old 10
2d best do 6
Best Sow six months old 10
2d best do 6
Best lot of Pigs, not less than 5, under 10 months 10
2d best do 6
Includes Nepolitan, Suffolk, improved China, Chinese, Mocha, and their grades.

HORSES.

MARSHAL—DR. JAMES MURRAY.

Judges—Geo. W. Duvall; Jno. Ridgely, of Hampton; Ramsay McHenry; Wm. B. Paca, and Geo. Forbes.

Best Stallion for heavy draught 20
2d best do 10
brood Mare for do 10
2d best do 8
Stallion for quick draught 20
2d best do 10
brood Mare for do 10
2d best do 8
Stallion for saddle 20
2d best do 10
brood Mare far saddle 10
2d best do 8
Thorough bred Stallion 20
2d best do 10
Thorough bred Mare 10
2d best do 5
Best pair Matched Horses 10
2d best do 5
Best saddle horse, mare or gelding 10
Best pair of draft horses 10
Best team of draft horses, not less than six 15
Best 3 year old colt or filley 10
2d best do 5
Best 2 year old colt or filley 6
2d best do 3
Best 1 year old colt or filley 5
2d best do 2

MULES AND JACKS.

Best Jack 10
2d best Jack 5
Best Jennet 10
2d best Jennet 5
Best pair of Mules 10
Best team of Mules not less than six 20

POULTRY.

MARSHAL—W. B. PERINE.

Judges—William C. Wilson, R. Tilghman Goldsborough, William Gilmor, Col. S. Hillen, Thos. R. Stewart.

For best pair of Turkeys, $2
best pair of Geese, 2
best pair of Muscovy Ducks 2
best pair of common do 2
best pair of Jersey Blues, 2
best pair of Dorking Fowls 2
best pair of Shanghai or other large East India breed, 2
best pair of other breeds, 2
best pair of Capons, 3
best caponed Turkey, 3
largest collection of Fowls 8

TOBACCO.

MARSHAL—ODIN BOWIE.

Judges—The State Tobacco Inspectors in Baltimore.

For the best Sample $15
2d best do 10
3d best do 8
4th best do 5
5th best do 3

The samples must be duplicate samples, drawn by a Tobacco Inspector, and no competitor shall receive more than one premium.

AGRICULTURAL PRODUCTIONS.

MARSHAL—THOS. R. HOLLIDAY.

Judges—John S. Sellman, J. R. Emory, John Jones, of Delaware; Wm. Thompson, Benj. M. Bowdle.

For best 5 acres of Corn $15
best acre of do 8
best 5 acres of Wheat 15
best acre of do 8
best half acre Irish Potatoes 8
best 5 acres of Rye 8
best 5 acres of Oats 8
best 5 acres of Barley 8
best 5 acres of Timothy 8
best 5 acres of Clover 8
best quarter acre of Carrots 8
best do do Ruta baga 8
best do do Sugar beets 8
best do Mangel wurzel 8
best do Turnips 8

Awards will be made at the Meeting, 22d Sept., on Wheat, Rye, Oats, Barley, Timothy and Clover. On all others on the list, awards will be made at the quarterly meeting of the officers of the society in February, 1851.

Competitors for Premiums for Agricultural Productions must produce a full statement of the mode of cultivation, and accompany the same with the certificate of 2 respectable men as to the product and the measurement of the ground, and also exhibit a sample of the crop at the fair.

AGRICULTURAL IMPLEMENTS.

MARSHAL—JNO. STABLER.

Class No. 1.

Judges on Ploughs, Harrows, Cultivators and Rollers:—Col. N. Goldsborough, Col. Wm. Coad, Rev. Mr. Aisquith, Col. J. Tilghman, John C. Clark, of Del.

Best single horse Plough 5
Cultivator 4
Harrow 4
Roller 8

Class No. 2.

MARSHAL—GIDEON BANTZ.

Judges—H. S. Ellsworth, Edmund Ruffin, Edward Tilghman, John Kibler, C. Wright.

Drills and broadcasting machines, Wheat and Grass Cutters, of all descriptions; wheat or grass rakes by horse power, cradles, carts, wagons, wagon gear, cart gear, ox yokes and ox gear.

Best broadcasting and drilling machine, for grain or grass seed $15
Best mowing or reaping machine 8
Best Horse Rake 4
Best set of wagon harness 4
Best ox yoke 2
Best grain cradle 2
Best wagon for farm use 8
Best ox cart 8
Best horse cart 5
Best set cart gear 4

Class No. 3.

MARSHAL—J. J. FRISBY.

Judges—M. T. Goldsborough, Dr. C. F. Shaw, T. A. Spence, Robert Gilmor, L. W. Washington.

Horse powers and all machines propelled by horse power not enumerated above; corn shellers, corn and cob crushers, by hand power, straw cutters, corn stalk cutters, and grinders by hand power.

Best sweep horse power $15
2d do do 8
Best rail-way horse power 15
Separator 8
hay and straw cutter 4
Corn sheller 4
Corn stalk cutter and grinder 5
Corn and cob crusher 5
Threshing machine 8
Pump for horse power 8

Class No. 4.

MARSHAL—GEO. Y. WORTHINGTON.

Judges—Gen. T. Tilghman, W. F. Johnson, Jas. L. Martin, Chapman Billingsley, Sam'l Stone.

All implements and machines not enumerated above.

Best Fanning mill $5
Root and vegetable cutter 2
Drill barrow for root crops 4
Churn 4
Hay and dung forks 2

Hand rakes 2
Portable hay-press 25
Best and most numerous collection of Agricultural Implements, with description thereof 30

In addition to the foregoing premiums on agricultural implements, Diplomas and Premiums will be awarded, for such new and meritorious implements as may be exhibited, by the Judges on Discretionary Premiums.

Persons presenting agricultural implements or articles of mechanical ingenuity and utility, are requested to furnish the Secretary with a particular description of the article, and the price and place where it can be obtained, as it is intended to publish a list of the articles exhibited at the Fair, for the benefit of the manufacturer and purchasers.

The following resolution of the Society was adopted at the annual meeting in 1849:

Resolved, That when any implement of agricultural interest, or machinery, shall have taken the first prize of this society—should it thereafter, in the estimation of its appropriate committee maintain its pre-eminence, a certificate of that fact shall be awarded it—but should any other of the same character challenge such implement or machinery, for mastery, upon three months notice being given the society, a premium shall be offered for the successful competitor—equal to the high prize of such article for such year, such challenge prize not to exclude the challenger from the first prize also.

When an implement or machine takes a certificate of pre-eminence, no first premium will be awarded, but the article next in excellence will take the second premium.

DAIRY AND HONEY.

MARSHAL—JAMES M'HENRY.

Judges—B. C. Howard, C. P. Craig, J. M. Duckett, H. F. Jackson and Wm. Guy.

For best specimens of fresh butter not less than 5 lbs. $5
2d best do 3
3d best do 2
For best firkin or tub of salted butter, not less than 6 months old 8
2d best do 5
3d best do 3
Best cheese, not less than 25 lbs. 5
2d do do 2
For best 10 lbs. Honey 5

The Honey to be taken without destroying the bees, and the kind of hives used, and the management of same to be stated by competitors.

The method of making the butter and cheese to be also stated by each competitor.

FRUIT.

MARSHAL—DR. R. E. DORSEY.

Judges—Dr. John H. Bayne, Gen'l Richardson, of Va., Judge Goldsborough, G. S. Holliday, Edwin J. Stevens.

For best and greatest number of choice varieties of Apples 5
do do do Peaches 5
do do do Pears 5
do do do Quinces 5
do do do Grapes 5
For greatest number of choice varieties of different kinds of fruit 8
2d best do do 5

VEGETABLES.

MARSHAL—H. C. TURNBULL.

Judges—David Kerr, H. Troup, Col. Walton, H. E. Bateman and Wm. R. Barker.

For the choicest and largest assortment of table vegetables 8
2d best assortment do 5
For best doz. long blood Beets 2
do Turnip root Beets 2
do 6 heads of cauliflower 2
do 6 heads brocoli 2
do 12 heads cabbage 2
For best dozen carrots 2
do dozen bunches celery 2
do dozen Egg Plants 2
do peck of Onions 2
do dozen Parsnips 2
do peck Seedling Potatoes 2
do peck sweet do 2
do 3 finest Pumpkins 2
do 6 winter Squashes 2
do samples of Beans 2
do do Peas 2

FLOWERS.

MARSHAL—DR. T. EDMONDSON.

Judges—Edw. Kurtz, Dr. Gideon, B. Smith, Robt. Buist, Josh. Pearce and D. Landreth.

For the greatest and choicest variety of flowers 8
2d best collection 5
For the best and greatest varie- of Dahlias 5
Do do do roses 5
Do do do camelias 5
Do Floral Ornament 10

HOUSEHOLD MANUFACTURES.

MARSHAL—CHARLES R. HOWARD.

A committee of five ladies to be selected from those attending the Exhibition
For best Quilt $5
2d best do 3
Best Counterpane, 3
2d do 2
Best hearth rug 3
do pair of homemade blankets 2
do best homemade carpet 2
2d best hearth rug 2
Best made shirt 5
2d do 3
Best fine long yarn hose 3
2d best do 1
Best coarse yarn hose 2
2d do do 1
Best homemade soap 3
2d best do 2
Best homemade bread 2
2d do do 1
Best homemade pound cake 2
do do sponge cake 2
do specimen of Pickles 2
do do of Preserves 2
do do Fruit Jelly 2
do do Embroidery 2
do do Worsted work 3

Discretionary premiums of $1 each can be awarded for meritorious articles not enumerated in above list to the amount of $20.

DOMESTIC WINES, BOUNCE AND CORDIAL

MARSHAL—J. C. WALSH.

Judges—W. H. Gatchell, Bennet Gough, T. M. Smith, Jno. E. Howard and Josiah Lee.

For the best homemade Wine $3
do do Bounce 3
do do Cordial 3

BACON HAMS.

MARSHAL—FRANK COOKE.

Judges—James A. Pearce, Jno. C. Brune, K. R. Owen, and Jno. D. Bowling.

For the best ham, cured by exhibitor 10
2d best do 6
3d best do 3
4th best do 2

All competitors for this premium are required to have their Hams cooked and brought to the Exhibition with the skin on. Each ham must have a card attached to it, with a motto written upon it, and be accompanied by a sealed letter, endorsed with the same motto, in which shall be given the name of the exhibitor and a statement of the manner of curing.

PLOUGHING MATCH.

MARSHAL—MARTIN GOLDSBOROUGH.

Judges—Basil D. Hall, Edward Plowden, E. F. Ruth, O. Horsey, and W. B. Willis.

For best Plough, as shown by the work actually performed and the test of the dynanometer, $10
2d best Plough 8
3d best do 6
4th best do 4
For best Ploughman 6
2d best do 4
3d best do 3
4th best do 2

The ploughs, teams and ploughmen must be on the ploughing ground by 11 o'clock on Thursday ready to take the places which will be assigned them by the Judges.

HAY AND STRAW.

Hay and straw will be furnished gratis for all animals entered for premiums, and grain will be provided, at lowest cost price, for those who desire to purchase.

☞ From the great liberality heretofore extended by Railroad and Canal Companies upon occasions of this kind, exhibitors may count upon having animals and articles intended for exhibition, transported free of cost; and visitors to the Show will be able to purchase tickets at greatly reduced rates.

ESSAYS.

COMMITTEE ON ESSAYS.—Edmund Ruffin, C. P. Holcomb, Edward Stabler.

For the best Essay on the *Comparative Advantage of Drill Husbandry over the old System*, $30; to be accompanied with a detailed statement of the saving in labor, seed, &c., and also the difference of product, and a statement of such experiments in various crops, as may have come to the knowledge of the writer.

For the best Essay on the *Comparative Value of different Manures, founded upon actual experiments*, $30.

For the best *Method of Keeping Farm Accounts*, $30.

Agricultural Steam Engine.

For the Best PORTABLE STEAM ENGINE, applicable to Agricultural purposes generally, $100.

COMMITTEE.—Col. C. Carroll, Col. H. Capron, Jas. Bruce, James Curran, Dr. O. C. Wharton, C. Hoskyns, M. T. Goldsborough, H. G. S. Key, and J. H. B. Latrobe.

SWEEPSTAKE PREMIUMS.

Sweepstake Premiums are offered to all who are disposed to contend for them, under the following regulations:

1st. Persons desirous of competing for any of these Premiums, can do so by having their names entered with Samuel Sands, Esq., Secretary, on or before the 1st day of the Annual Exhibition, and at the same time paying one dollar on each article contended for.

2d. The Premium on each article will be composed of the whole amount subscribed, under the above regulation, for such article, and will be awarded to the subscriber who exhibits the best sample.

3d. No one can be a competitor for these Premiums who is not the actual producer of the article contended for.

PREMIUMS.

For best bushel of		Corn in the ear.	For best bushel of		Sweet Potatoes.
do	do	Wheat.	do	do	Carrots.
do	do	Rye.	do	do	Parsnips.
do	do	Oats.	do	do	Sugar Beets.
do	do	Barley.	do	do	Table Beets.
do	do	Buckwheat.	do	do	Ruta Baga Turnips.
do	do	Timothy Seed.	do	do	Hybrid do
do	do	Clover Seed.	do	do	White do
do	do	Orchard Grass Seed.	do	do	Mangel Wurtzel.
do	do	Irish Potatoes.			

COMMITTEE.—Ezekiel Foreman, of Queen Anne's County; Wesley Linthicum, of Anne Arundel Co.; Wm. Slater, of Baltimore County; Isaac C. Anderson, of Howard District, and Jas. M'D. Goldsborough of Talbot. *Marshal*—Wm. Jones, of Baltimore County.

ROOMS OF THE MARYLAND STATE AGRICULTURAL SOCIETY.

MAY 7, 1851.

The stated quarterly meeting of the Society was held this day. CHARLES B. CALVERT, Esq., President, in the chair.

A statement was made as to the action of the Committee of the citizens appointed to raise the means of rendering the Society's Exhibitions permanent in the city of Baltimore, from which it seemed that no adequate means had been taken, except in very few instances, to collect the required aid.

Col. Ware, of Virginia, stated, that a Society had been formed in the Valley Counties of Virginia, and that it was probable a union could be formed with it; and if so the citizens of Winchester would furnish all the needful accommodation. The same facilities for the free transportation of stock, &c., would be extended to the Exhibition at Winchester, as had been extended here.

Mr. Clement, of Pennsylvania, desired that Philadelphia might be considered as desirous of having the advantage of such an Exhibition in their midst. The people were well judging and liberal, and knew the benefits to be derived from so useful and popu-

lar an institution, and if that city should be chosen, the money would be forthcoming.

The city of Washington, the Eastern Shore of Maryland, and other neighboring places, were severally proposed, and with a view to dispose of the subject, the following preamble and resolutions were adopted.

Whereas, The Maryland State Agricultural Society has heretofore made known to the community, its want of funds, and its inability to sustain its annual exhibitions with its own resources; and, whereas, looking upon the city of Baltimore as the proper place for the holding of these exhibitions, and to the immense benefits which have accrued, and are likely to accrue, to the community in whose vicinity they are held; this Society has never doubted that the citizens of Baltimore would promptly and voluntarily contribute the small amount required to place and keep it in the most flourishing condition. And, whereas, the people of Baltimore, for want of proper appreciation of the importance of this subject, or for some other reason, have hitherto failed, and are likely to fail, to realize these our just expectations. And, whereas, in view of the fact that this Society is composed of farmers from four States, Maryland, Delaware, Pennsylvania and Virginia, comprehending also the District of Columbia; and that it has been represented from several quarters that the citizens of other cities in this vast and wealthy region are equally entitled to, and might appreciate more highly the benefits flowing from the presence of these exhibitions and the vast concourse of visitors attracted by them,

Be it therefore resolved, That Col. Wilson M. Carey, of the city of Baltimore; Geo. W. Dobbin, of Howard Dist.; Col. J. W. Ware, of Virginia; Aaron Clement, Esq., of Pennsylvania; G. S. Hollyday, of the Eastern Shore of Maryland; and C. P. Holcomb, Esq., of Delaware, be appointed a Committee to make known to the agricultural community represented by this Society, its intention to invite the several cities and towns in this region to compete for the benefit of its annual Fairs, and that its next annual Exhibition will be held in the vicinity of that city or town which shall make the most liberal and advantageous proposals to this Society; and said Committee are instructed to report to its next meeting, to be held on the 4th day of June next.

The death of JOHN S. SKINNER, Esq., an honorary member of this Society, having been announced, the following preamble and resolutions were unanimously adopted:

Whereas, in the death of John S. Skinner, the constant friend of American Agriculture, and the pioneer of its early Literature, the community has sustained a great and deplorable loss; and whereas it especially becomes this Society, representing the Farmers of Maryland, with whom Mr. Skinner was so closely identified, to give expression to their sorrow at this mournful event, therefore,

Be it resolved, That, recognizing in the fullest sense the distinguished merits of the deceased, and his right to be honored for the valuable and efficient services of a whole life devoted to the cause of Agriculture, we mourn his death as a calamity to the whole community, and to our brotherhood particularly.

Resolved, That this Society will enter in, and do now recommend to the grateful approval and support of all Farmers, the measure of providing, by general subscription, a substantial pecuniary testimony of their appreciation of Mr. Skinner's eminent services.

The Secretary presented a communication from the Board of Managers of the Maryland Institute for the Promotion of the Mechanic Arts, announcing that the 20th of October had been designated for the opening of their annual Exhibition at their new Hall, and requesting, if in accordance with the convenience of the Agricultural Society, that a period should be fixed for the holding of their Cattle Show, so that it might take place during the exhibition of the Institute.

The subject was referred to the next meeting of the Society.

The Society adjourned to meet again on the 4th day of June next. SAMUEL SANDS,
Rec. Sec'ry.

[☞ The State election taking place on the 4th June, the adjourned meeting was postponed to the 18th June.]

BALTIMORE, June 18, 1851.

The Executive Committee met in the Hall of the Society pursuant to adjournment, Chas. B. Calvert, Esq. President, in the Chair.

Messrs. Chauncy Brooks and Johns Hopkins, a Committee of citizens of Baltimore, appointed at a meeting held on the 28th of May, to devise a plan to secure a lot, and the means for improving it, for the use of the Maryland State Agricultural Society, in holding its Annual Exhibitions, were introduced to the Executive Committee, and stated, that the sum of $32,200 had been subscribed in shares of $50 each, on the terms mentioned in the proceedings of the meeting referred to, and tendered the same to the State Society for its acceptance.

On motion of Geo. W. Dobbin, Esq. the proposition was accepted, and the thanks of the Society were unanimously tendered to Messrs. Brooks and Hopkins, and others, for their exertions in obtaining the necessary means for the accommodation of the Society in holding its annual exhibitions.

The President then announced, that the first business in order was the selection of the time of holding the Cattle Show, and the arrangement of the Premium list for the same.

Sundry propositions were made as to the time, and it was finally ordered, on motion of Mr. Dobbin, that the Exhibition be kept open FOUR DAYS, and that it be held on TUESDAY, WEDNESDAY, THURSDAY and FRIDAY, the 23d, 24th, 25th and 26th SEPTEMBER NEXT.

On motion of G. S. Holliday, Esq., V. P. for Kent Co. it was ordered, that the premiums be increased over the last year's rates (except when otherwise directed in arranging the list,) as follows:

All $15 prizes to be $20—$8 do. to be $10—$5 do. to be $6—$4 do. to be $5—$3 do. to be $4.

Propositions were made to increase the number of prizes for Horses and Sheep, which were concurred in.

Among other changes proposed and adopted, which will be found incorporated in the list of prizes, rules and regulations, &c. was one, providing that any implement or machine which has heretofore taken the first prize, and shall maintain its supremacy over all others exhibited, shall as heretofore be entitled to a certificate to that effect —and that no first prize shall be awarded to that article.

The list having been examined, amended, and adopted, it was ordered to be published.

On motion, it was ordered, that the proceedings

of the State Society, since the annual meeting, together with the proceedings of the citizens of Baltimore, relative to the lot and accommodations for the Annual Exhibitions, with the list of subscribers to the fund raised therefor, be also published with the list of premiums, in order to their preservation, and for future reference.

Mr. Dobbin presented the Address to accompany the Prize list, which was adopted by the Board.

On motion of Mr. Walsh, of Harford, it was ordered, that a committee of three be appointed, to co-operate with the Commttee of the Citizens in fitting up the necessary buildings, &c. on the grounds selected for the Exhibition, and that Messrs. Dobbin, Calvert and Sands be the Committee. It was also ordered, that Mr. Dobbin be appointed to act as agent in all matters pertaining to the interests of the Society, to consult with the five Trustees to be appointed by the stockholders of the fund raised by the citizens.

The President offered the following, which was unanimously adopted by the Board:

Resolved, That the thanks of the Society be, and they are hereby tendered, to *Geo. W. Dobbin*, Esq. for his zealous and efficient services rendered to the Society in regard to the obtainment of a place for holding our annual Exhibitions.

The Board then adjourned to the 1st Wednesday in August. By order,

SAM'L SANDS, Sec'ry.

PROCEEDINGS OF THE CITIZENS OF BALTIMORE.

MARYLAND AGRICULTURAL FAIRS.

A meeting of the citizens of Baltimore friendly to the holding of an Agricultural Fair at or near the city of Baltimore was held in the rooms of the Board of Trade on the 28th of May, 1851, when CHAUNCY BROOKS was called to the Chair, and GEORGE W. DOBBIN appointed Secretary.

The object of the meeting having been explained by Mr. Dobbin, the accompanying plan was submitted for the raising of $25.000, in shares of fifty dollars each, to be invested by a committee of five of the Stockholders in a lot and improvements for the use of the Maryland State Agricultural Society, for ten years, or for so many thereof as they shall continue to hold annual exhibitions therein, and the following resolutions were adopted:

Resolved, That the plan submitted be adopted, and that Chauncey Brooks, Johns Hopkins, William Devries, John Glenn, Zenos Barnum, Daniel Holt, Hamilton Easter, Henry Shirk, Henry Tiffany, Alexander Murdoch and George W. Dobbin, be a committee to have the subscriptions made as therein, and that they be authorized to confer with the Agricultural Society at their next meeting on the 4th of June, and at any subsequent meeting on the subject of the proposed accommodation.

Resolved, That the thanks of this meeting be given to the Board of Trade for the use of their Chamber.

The meeting then adjourned.

CHAUNCEY BROOKS, Chairman.
GEO. W. DOBBIN, Secretary.

Plan for raising the necessary funds to purchase a lot, and for the erection of suitable accommodations, for the holding of the Annual Exhibitions of the Maryland State Agricultural Society, as adopted at a meeting held in the room of the Board of Trade, in the Exchange, on the 28th of May:

WE, the undersigned, agree to take the number of Shares opposite our respective names, in the enterprise of purchasing a Lot of Ground, and improving the same with buildings and fixtures, for the use of the Maryland State Agricultural Society now, and for ultimate profit to ourselves hereafter, upon the following terms and conditions:

The whole sum to be subscribed to be Twenty-five Thousand Dollars, divided into shares of Fifty Dollars each, payable on demand.

When the whole shall be subscribed, public notice to be given of a meeting of the subscribers, who shall, by a majority of the shares represented in person or by proxy, each share being entitled to one vote, choose Five persons to collect the subscriptions, and purchase the lot, and improve the same, the title to be vested in the said five, and the survivors of them, as Trustees for the use of the Shareholders, in such manner that the said shares may be transferable by the endorsement and delivry of the Certificates therefor.

The Lot and Improvements so purchased and made shall be the property of the Shareholders, in the proportion of their respective interests, and the use of it shall be given to the Maryland State Agricultural Society for ten years, or for so many thereof as they shall continue consecutively to hold their annual Exhibitions thereon, they paying all taxes thereon (excepting paving taxes;) at the end of which time the disposition which shall be made of it, whether to continue the use of it to the said Society, or to sell or otherwise dispose of it, shall be determined by the vote of a majority of shares.

The holder of Two Shares or more, to be, in virtue of such ownership, a member of the Maryland State Agricultural Society during such holding, and entitled to all the privileges of membership, without the payment of any annual contribution.

It is understood that the sum to be expended on the improvements shall not exceed Five Thousand Dollars, which expenditure is to be made under the joint direction of the said Trustees and such agent as the Agricultural Society may appoint on their behalf. The materials of which the improvements shall be constructed, shall belong to the Shareholders and the Society respectively in the proportions in which they shall be supplied by each.

The Committee appointed in pursuance of the resolution adopted as above, entered forthwith on the discharge of the duties assigned them, and at the meeting of the State Society on the 18th June, reported to the Board of Managers the result of their labors, viz: that 644 Shares had been subscribed, which, at $50 per share, amounts to $32,200—being $7,200 more than originally contemplated.—Offers of additional subscriptions were subsequently made.

NAMES OF SUBSCRIBERS, AND NUMBER OF SHARES TAKEN BY EACH.

Abbott, S. A.	1	Bigham, John	2
Appold, Geo. & Son	2	Bradford, Geo. W.	1
Abbott, Horace	2	Berry, J. & T. L.	2
Abell, A. S.	2	Burns & Sloan	2
Adams & Co. Express	2	Baker & Bro.	2
Adams, James C.	2	Brown, R. & Son	2
Brooks, C. Son & Co.	6	Bower, J. Jacob	2
Burns, Russell & Co.	2	Boyd, Robert	2
Bridges, William	2	Bonn, Bros. & Co.	1

Byrd, J. Edward 1
Brune, F. W. & Sons 2
Beatty, Wm. H. 2
Ballard, Chadbourn & Co. 2
Birckhead & Pearce 2
Boggs, Cottman & Co. 2
Baylies & Tyson 2
Butts, Pickrell & Co. 2
Brown, John W. & Son 2
Barnum & McLaughlin 10
Brown, Wm. B. 2
Brown, J. C. & Bro. 2
Bantz, Theodore S. 1
Byrd, Smith & Tiffany 1
Cushing, John & Co. 2
Campbell, Ross 2
Cohen, E. P. 2
Chesnut, William 2
Cassard, G. & Son 2
Clayton & Hewes 2
Conway, John R. 2
Cheston, Galloway 2
Crook, Francis A. 2
Cook, Jas. H. & Bro. 2
Corner, James & Sons 2
Cariss, Sampson 4
Cummis, John & Co. 2
Canfield, Bro. & Co. 4
Crosby, J. 2
Crane, W. & Son 2
Clark, Gabriel D. 2
Canby, Thos. Y. 2
Cortlan & Co. 2
Chapen, Philip 2
Carpenter, W. C. 1
Collins, George C. & Denson 1
Cowles, W. 1
Close & Brother 2
Cole & Howard 2
Cushings & Bailey 3
Curley, James W. 2
Davidson, A. B. 2
Dungan, Stevenson 2
Drakely & Fenton 5
Danskin, Wash. A. 1
Dorbacker, William 4
Duvall, E. G. 2
Dailey & Co. 1
Dougherty, Chas. M. 2
Deford, B. 2
Dallam & Carroll 2
Dunham, T. C. 2
Elder, B. T. & Co. 2
Eden, Wm. 2
Ellinger, Samuel 6
Easter, Hamilton 4
Easter, John of John 2
Elmore, James 2
Eaton, Brothers & Co. 2
Elder, Samuel 1
Eichelberger, O. W. 2
Ellicott, J. H. & B. H. 2
Falconer & Haskell 2
Frey, E. & S. 1
Fisher, Alexander 2
Fischer, Chas. & Co. 2
Flannigan, Andrew 2
Freeland & Hall 1
Fisher, James I. 2
Fenby, S. & Bro. 2
George & Jenkins 2
Gillett, Martin & Co. 2
Gambrill, Chas. A. 2
Graham, Wm. & Son 2
Gwyn, Reid & Taylor 2
Guy, Wm. 1
Guest & Gilmor 2
Gregg, John 2
Greenway, E. M. Jr. 2
Garrett, R. & Sons 6
Grahame, Israel J. 2
Goddard, Charles 2
Gosnell, L. W. 2
Glenn, John 10
Gehrman, Chas. 1
Gilmore, James 2
George, Sam'l K. 5
Hobson, J. E. 2
Hambleton, Thos. E. 1
Hewes, John G. 2
Hayes, Davis 2
Hoffman, S. Owings 2
Hoffman, Samuel 2
Hoffman, Burneston & Co. 2
Hack, Andrew & Son 1
Hammond, Pollard & Laurasen 1
Howell & Brother 2
Hayward, Bartlett & Co. 2
Hartman, J. P. 2
Hall, Rich. H. & Son 2
Harrison, Benj. 1
Hiss, P. Hanson 2
Heald, William 2
Hopkins, Johns 4
Herr, Michael 2
Hooper, Jas. A. 2
Hooper, Robert 2
Hooper, Wm. E. 2
Hurlbut, Samuel 2
Hiser, White & Carson 1
Hurst & Berry 1
Hare, Peirson, Holliday & Co. 2
Holt & Maltby 4
Holden, E. P. 2
Henderson, John & Co. 2
Howard, Robt. 2
Harris, S. & Sons 2
Holtz, Emanuel 1
Hyatt & Stump 2
Hopkins & Fairchild 2
Hopkins, Basil B. 2
Israel, J. Robert 2
Inloes, J. S. 2
Jackson, Henry F. 2
Jenkins, Wm. & Son 2
Jenkins, E. & Sons 2
Johnston, Henry E. 1
Jenkins, Hugh 2
Jenks, Francis H. 2
Johnson & Travers 2
Kelly, Ball & Criss 2
Kelso, J. S. 2
Keyser, S. S. & Co. 2
Kettlewell, John 2
Kirby, John & Son 2
Keith, M. Jr. & Son 2
Knell, Henry 2
Keighler, Wm. H. 2
Koons, Chas. H. 2
Kirkland, Chase & Co. 2
Kipp, John & Son 2
Loney, Townsend & Loney 2
Larrabee, Eph'm 2
Lowman, Bros. 1
Lurman, A. 1
Leslie, Robert 1
Levering, T. W. & Son 2
Love, Martin & Co. 2
League, George 2
Levering & Co. 2
Lucas, F. Jr. 1
Lilly, Alonzo 2
Long, E. B. 2
Lewis, Martin & Co. 2
Murray, H. C. 1
Murdoch, W. T. & A. 2
Medcalfe & Rogers 2
Matthews, Thos. R. 2
Malcom, P. & Co. 2
Mankin, Henry 2
Mason, R. & Bro. 2
Manning & Lee 2
Montell, J. E. & Bro. 2
May, Edward 2
Medcalfe, Spicer & Co. 2
Milburn, R. N. 2
Morris, F. & Co. 2
Murphy, John & Co. 2
Millikin, James H. 2
Martin, D. G. 2
Miller & Mayhew 5
Mathias, John A. 1
Meredith, Spencer & Co. 1
Murdoch, Duer & Evans 1
McDowell & Gable 2
McIntosh, John 2
McKanna & Co. P. 2
McIlvain & Williams 2
Murdoch, Fridge 1
McCann, Wm. 2
McEldowney, R. & Co. 2
McConky, Jas. & Co. 2
McCullough, Jno. & Co. 2
McEldoony, Henry 2
McKim, William 2
McKim, Haslett 2
Nelson & Clark 2
Neale & Luckett 2
Norris, Calwell & Co. 2
Orem, Hopkins & Rose 6
Oler, W. H. 1
Penniman & Bro. 1
Pouder, Wm. P. 1
Plummer, Rich. 1
Parker, E. L. & Co. 1
Parkhurst, J. Jr. 2
Patterson, A. B. 2
P. Thomas 2
Pratt, Enoch 2
Purvis, James F. 1
Pendleton, R. W. 2
Patterson, W. 2
Popplein, Nicholas 4
Paine, Allen 2
Porter, R. B. 2
Pearson, Jos. Jr. 1
Poulson, A. W. 2
Price, Aug. M. & Co. 2
Russell, Weidebaugh & Co. 1
Reynolds, Jos. 2
Rusk, Wm. L. 2
Robertson, Mann & Co. 2
Riggs, Samuel 2
Riely & Pendleton 2
Reiman & Williar 2
Reynolds, J. W. & E. 2
Ricards, John R. 1
Rogers, N. & Co. 2
Reip, Alfred H. 2
Schæffer & Loney 2
Smith & Atkinson 1
Schæfer, C. A. 2
Spence & Reid 2
Sellman, Jas. C. & Son 2
Stickney & Beatty 2
Sperry & Pleasants 2
Smith, Thomas M. 2
Stuart, D. & Son 2
Sanders, J. W. & Bro. 2
Shirk, Henry 2
Swann, Thomas 4
Smith & Tyson 2
Schumacher, A. 2
Stine, James 1
Sinclair, R. Jr. & Co. 2
Starr, Robert 1
Shriver, J. S. 1
Sullivan, F. 2
Sullivan, P. H. 2
Sharkey, John & Co. 1
Sewell, R. 4
Smith & Nicodemus 2
Stirling, A. 2
Smith, Henry M. 2
Slingluff, Devries & Co. 5
Slingluff, Jesse 2
Slingluff, C. D. 2
Stellman & Henricks 1
Thomas, Sterling 2
Tiffany, Henry 5
Turnbull, Dall & Slade 2
Tiffany, O. C. 2
Taylor, C. R. 2
Toy, L. 2
Thurston, Phineas 2
Turner, J. M. 2
Tyson & Dungan 2
Tyson, Isaac Jr. 2
Thomson, Laur. & Co. 2
Turner, J. J. & F. 2
Turner, Robert 2
Turner & Mudge 2
Trust, Jacob 2
Taylor & Gardner 2
Vickers, G. R. 2
Vickers, J. & Son 2
Wylie, Robert 2
Whiteford, D. 2
Whitman, E. Jr. 2
Wilson, Wm. & Sons 5
Whelan, Wm. 4
White, Chas. B. 2
Williams, Jno. & Jas. & Co. 2
Williams, Edward 4
Walker, Noah & Co. 6
Winchester, S. C. 1

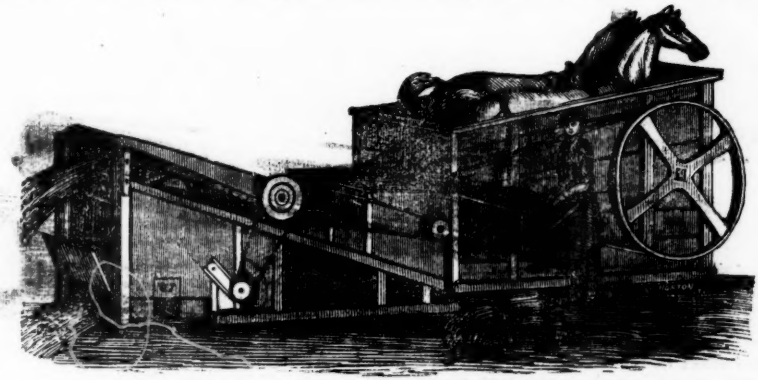
White & Elder	1	Walters, W. T. & Co.	2
Wilson, Thomas	2	Wyman, Appleton & Co.	6
Warfield, D. & Son	2	Watkins, Dungan & Waesche	6
West, John S.	2	Woodward, Wm. & Co.	2
Whitridge & Co.	2	Whiteley Bros. & Stone	2
Wright, W. H. D'C.	2	Walker, John W.	2
Williams, John	2	Zell, Peter	2
Wilson, Young & Co.	2		
Withington & Eastman	2		

At a meeting of the Shareholders held in pursuance of public notice, at the State Agricultural Society's Rooms, on the 19th of June, 1851, CHAUNCEY BROOKS, Esq., was called to the Chair, and JAMES MCCONKEY, appointed Secretary.

On motion, it was ordered, that an election be now held for Five Trustees, to carry out the objects of the Shareholders, as detailed in the plan adopted at the meeting on the 28th May; when the following gentlemen having received a majority of all the votes cast, were declared duly elected, viz:

Chauncey Brooks,
Johns Hopkins, Zenos Barnum,
Alexander Murdoch, Wm. Devries.

Whitman's Premium Wrought Iron Rail-way Horse Power and Thresher.



At the great Maryland State Fairs held at Baltimore, 1849 and 1850, there was the largest exhibition of HORSE POWERS and Threshing Machines ever exhibited in this country, and all thoroughly examined and tested by a large and competent committee, who awarded the First Premium for two years to the above Power, as the BEST on the ground. More than five thousand of these Powers are now in use by many of the best farmers in the country, and they consider them to be double in power to any Sweep Powers, more durable, and much easier for the horses. Price $100. Only for sale by

je. 1 E. WHITMAN, JR. & CO., Baltimore, Md.

DRILLS—DRILLS.

Our success in the sale of Wheat Drills last season, and the universal satisfaction which they gave in their performance, will cause others no doubt this season to wake up in this matter, who will be out with long puffs and certificates of the merits of their new Drills. But farmers will do well to bear in mind that among the great variety of Wheat Drills introduced into this State, Pearson's, and the Messrs. Pennock's Drills, are the only ones which have been used successfully—both of which are for sale by

E. WHITMAN, JR. & CO.,

je. 1 Corner of Light and Pratt streets, Baltimore, Md.

Eddy's one wheel wrought iron Horse Power.

THE most simple, durable and easiest draught Power in the world, for 3, 4, 5, 6 or 7 horses. It being made of wrought iron, there is no danger of its being broken or worn out by use. It can be taken down, or put up in ten minutes time, and easily transported in a one horse cart. It may be worked in the open field, or under cover, as the farmer may desire, and is one of the greatest improvements of the day.

We have enlarged and very much improved it since last season, and can recommend it to the farmers as a superior article, and one that we have not the least doubt they will highly approve.

For sale by E. WHITMAN, Jr. & Co. June1

GATCHEL'S Patent WATER RAMS.

FOR SALE at E. Whitman, Jr. & Co's Agricultural Establishment, No. 55 Light street. J. Hewes & Co., corner Pratt and Frederick sts., Baltimore, Md. These machines are cheap and durable; will elevate a constant stream of pure water any height or distance required, *without labor*. Any amount of references can be given as to their reputation, simplicity, durability, &c.

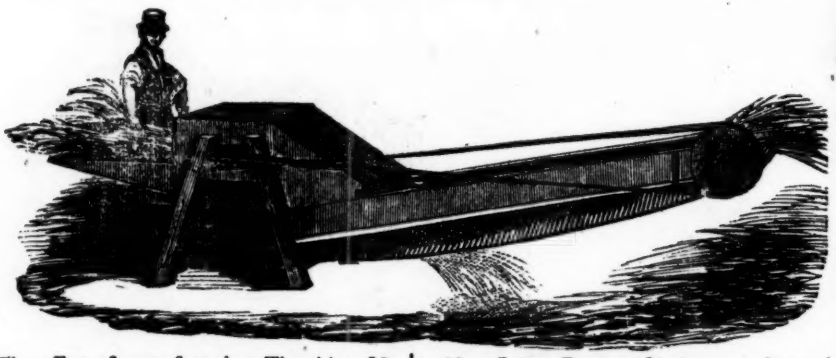
The patentee is prepared to furnish all sizes of machines, with Lead, Cast and Wrought Iron, Glass or Cement Pipes, and to erect the same with neatness and despatch, in any part of the United States. All work warranted, or no charge. Address, describing location, &c.

J. L. GATCHEL, Elkton, Md.

☞ I refer, by permission, to Samuel Harris & Sons, Exchange Brokers, or Robt. A. Taylor, Baltimore, Md. je.1-4t*

BOOKS ON AGRICULTURE, for sale.

Sinclair & Co.'s Threshing Machine and Separator.



The effort of manufacturing Thrashing Machinery, possessing the important requisite of combining strength, durability and simplicity, we believe is fully attained by the machinery we are now making for that purpose. The cylinders are made open, with six beaters, covered with heavy wrought plate iron, which prevents any possible wear to the surface of the beaters, and well secured by a strong wrought iron band at each end and in the centre. Cylinders made upon this plan act upon the principle of a Fan, thus preventing that vast collection of dust around the feeder, which must be the case in using the solid cylinder. Those wishing to purchase, by giving timely notice, will be furnished with our best patterns, and warranted.

The following set is generally preferred:

Lever Power, No. 2,	price $100
Thrasher, 25 inch,	50
Straw Seperator, 25 inch,	18
Driving Band,	10
	$178

Also, Lever Powers of *extra capacity*—price $135.

Wrought iron Rail-way or *Endless Chain* Powers, for one or two horses, *latest improved*—price $75 a 100.

20, 25 and 30 inch Thrashers—$40, 50 a 60.
do Straw Seperators—$15, 18 a 20.

☞ Oil can, wrenches, and Directions for management furnished gratis.

Horse Hay, or Gleaning RAKES—a most excellent Machine; every farmer should have at least one—price $8 to 11.

Loafer Hand Rakes, for manual power—capacity equal to a dozen common hand Rakes—$2.

In store—a general assortment of CHURNS, OX YOKES, &c. Also, HARVEST TOOLS of every description.

R. SINCLAIR, Jr. & Co.
jy. 1 58, 60 and 62 Light street.

Whitman's Premium Iron Cylinder Thresher.

This Thresher received the First Premium in Baltimore in 1849 and 1850. It is taking the place of all other threshers in this country, and is admitted to be the best Thresher in use. The cylinder being all in one piece of iron, will last one hundred years in constant use; and will do more, and better work, than any Thresher that can be made. No farmer who knows the advantages of this thresher, will use any other.

Price for large size $50; smaller, $44. For sale by E. WHITMAN, Jr. & Co. Balto., Md.